EPA Jacket 7969-345

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

October 12, 2017

Jeffery H. Birk PhD
Regulatory Manager
BASF
26 Davis Drive
Research Triangle Park, NC 27709

Subject: Registration Amendment – Label Amendment to Change Directions for Use and additional Terms and Conditions to the Registration as Registered on November 9, 2016 for Use on Dicamba-tolerant Cotton and Dicamba-tolerant Soybeans
Product Name: Engenia Herbicide
EPA Registration Number: 7969-345
Application Date: October 12, 2017
Decision Number: 534661

Dear Dr. Birk:

In response to the high number of crop damage incidents reported to EPA since June 2017, BASF submitted a label amendment to change the directions for use on its product as well as a request to amend its registration to include additional terms and conditions. EPA approves the labeling proposed by BASF as well as the additional terms and conditions of registration. EPA has determined that the Engenia Herbicide (EPA reg. no. 7969-345) labeling and registration continue to meet the standard of registration with the requested amendment as it did on December 20, 2016 when EPA registered these new uses. The amendment approved through this letter includes additional restrictions further minimizing off-field movement of the active ingredient dicamba and do not affect the conclusions in the supporting assessment of risk. EPA accordingly continues to rely on all the assessments that supported the new uses, and therefore does not require a revised endangered species effects determination, nor any other new risk assessment. This approval contains registration terms and conditions that are in addition to the conditions set forth in the new use approval granted on December 20, 2016. These terms and conditions do not supersede any conditions that were previously imposed on this registration. Therefore, BASF continues to be subject to existing conditions on its registration and any deadlines connected with them, including but not limited to the automatic expiration date of December 20, 2018. The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable under FIFRA Section 3(c)(7)(B) subject to the following additional terms and conditions to ensure that the new labeling is provided at the point of sale for the 2018 use season.

The next label printing of this product, which should occur as soon as practicable, must use this approved labeling unless subsequent changes have been approved. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. After the next printing, you may only distribute or sell this product if it bears this new

revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3. In order to assure the new labeling is implemented for use in the 2018 application season, the appended terms and conditions (listed here) have been added to the existing terms and conditions of this registration. BASF, the registrant, will:

1. Make every effort to relabel all existing Engenia herbicide product inventories within the channels of trade and within BASF's possession.
2. Relabel existing bulk storage units in place with new labeling. Relabeling will be completed at an EPA registered establishment.
3. Return existing minibulk containers to an approved EPA Establishment site and relabel with new labeling.
4. Return existing 2 x 2.5 gallon cartons and jugs to an approved EPA Establishment site and either relabel or exchange product for new product containing the new labeling.
5. Report as required by FIFRA and implementing regulations.
6. Communicate to retailers to not sell product until relabeling is appropriately conducted.
7. Inform retailers who are not registered establishments the importance of the new labeling and to contact BASF immediately, so that BASF can reclaim the retailer inventory and provide replacement product with labeling updated in a registered establishment.
8. Provide a copy to EPA of the communications used to inform retailers and others as described above.

Please be aware that by adding/retaining a reference to the company's website on your label, the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling including all supplemental labels. The new labeling and terms and conditions of registration are hereby granted. As with the December 20, 2016 new use approvals for use of Engenia Herbicide on dicamba-tolerant cotton and dicamba-tolerant soybeans, if these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions, please contact me by phone at 703-305-1243, or via email at montague.kathryn@epa.gov.

Sincerely,

Kathryn V. Montague

Kathryn Montague, Product Manager 23
Herbicide Branch
Registration Division (7505P)
Office of Pesticide Programs

Enclosure(s)

RESTRICTED USE PESTICIDE

For Retail Sale To and Use Only by Certified Applicators or persons under their direct supervision, and only for those uses covered by Certified Applicators certification.

This label supersedes any previously issued labeling, including previously issued supplemental labeling.

This EPA registration expires December 20, 2018 unless the US EPA determines before that date that off-site incidents are not occurring at unacceptable frequencies or levels. **DO NOT** use or distribute this product after December 20, 2018, unless you visit www.EngeniaQuestions.com and can verify that the EPA has amended this expiration date.

BASF

We create chemistry

Group [redacted] **Herbicide**

Engenia®

Herbicide

ACCEPTED
10/12/2017
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 7969-345

For weed control in Dicamba-tolerant (DT) cotton†; Dicamba-tolerant (DT) soybean†; asparagus; conservation reserve programs (CRP); corn; cotton; fallow cropland; farmstead turf (noncropland) and sod farms; grass grown for seed; pasture, hay, rangeland, and farmstead (noncropland); proso millet; small grain; sorghum; soybean; and sugarcane

†Only for use in states listed as US EPA approved in the **Dicamba-tolerant (DT) Crops** section of this label.

Active Ingredient*:	
Dicamba: N,N-Bis-(3-aminopropyl)methylamine salt of 3,6-dichloro-o-anisic acid	60.8%
Other Ingredients:	39.2%
Total:	100.0%

*Contains 48.38% dicamba (5 pounds acid equivalent per gallon or 600 grams per liter)

EPA Reg. No. 7969-345 **EPA Est. No.**

KEEP OUT OF REACH OF CHILDREN

CAUTION/PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See inside for complete **First Aid**, **Precautionary Statements**, **Directions For Use**, **Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).

Net Contents:

BASF Corporation
26 Davis Drive, Research Triangle Park, NC 27709

FIRST AID	
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. • **DO NOT** give anything by mouth to an unconscious person.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth to mouth, if possible. • Call a poison control center or doctor for further treatment advice.
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357).	

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION. Harmful if swallowed or inhaled. Avoid breathing vapor or spray mist. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after and before eating, drinking, chewing gum, using tobacco, or using the toilet.

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Personal Protective Equipment (PPE)

All mixers, loaders, applicators, and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Waterproof gloves
- A NIOSH-approved dust/mist filtering respirator with any R, P, or HE filter or a NIOSH-approved number prefix TC-84A.

See **Engineering Controls** for additional requirements. Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

DO NOT apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwater or rinsate. Apply this product only as directed on the label.

This chemical is known to leach through soil into groundwater under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Ground and Surface Water Protection

Point-source Contamination

To prevent point-source contamination, **DO NOT** mix or load this pesticide product within 50 feet of wells (including abandoned wells and drainage wells), sinkholes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. **DO NOT** apply pesticide product within 50 feet of wells. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pad or properly diked mixing/loading areas as described below.

Mixing, loading, rinsing, or washing operations performed within 50 feet of a well are allowed only when conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be on or move across the pad. The pad must be self-contained to prevent surface water flow over or from the pad. The pad capacity must be

maintained at 110% that of the largest pesticide container or application equipment used on the pad and have sufficient capacity to contain all product spills, equipment or container leaks, equipment washwater, and rainwater that may fall on the pad. The containment capacity does not apply to vehicles delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

Care must be taken when using this product to prevent:
- Back-siphoning into wells
- Spills
- Improper disposal of excess pesticide, spray mixtures, or rinsate

Check valves or antisiphoning devices must be used on all mixing equipment.

Movement by Surface Runoff or Through Soil

DO NOT apply under conditions which favor runoff. **DO NOT** apply to impervious substrates such as paved or highly compacted surfaces in areas with high potential for groundwater contamination. Groundwater contamination may occur in areas where soils are permeable or coarse and groundwater is near the surface. **DO NOT** apply to soils classified as sand with less than 3% organic matter and where groundwater depth is shallow. To minimize the possibility of groundwater contamination, carefully follow the specified rates as affected by soil type in the **Crop-specific Information** section of this label.

Movement by Water Erosion of Treated Soil

DO NOT apply this product through any type of irrigation system including sprinkler, drip, flood, or furrow irrigation. Ensure treated areas have received at least 1/2-inch rainfall (or irrigation) before using tailwater for subsequent irrigation of other fields.

Endangered Species

The use of any pesticide in a manner that may kill or otherwise harm an endangered species or adversely modify their habitat is a violation of federal law.

Directions For Use

RESTRICTED USE PESTICIDE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. This labeling must be in the user's possession during application.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Observe all precautions, restrictions, and limitations in this label and the labels of products used in combination with this product. Keep containers closed to avoid spills and contamination.

All applicable directions, restrictions, precautions, and **Conditions of Sale and Warranty** are to be followed.

RESTRICTED USE PESTICIDE

APPLICATION RECORD KEEPING AND TRAINING REQUIREMENTS

Record Keeping Requirements

Applicators must keep the following records for a period of two years; records must be generated within 14 days of application and a record must be kept for every individual application. Records must be made available to State Pesticide Control Official(s), USDA, and EPA upon request. The following information must be recorded and kept as required by the Federal Pesticide Record Keeping Program, 7 CFR Part 110:

1. **Full name of the certified applicator**
2. **Certification number of the certified applicator**
3. **Product name**
4. **EPA registration number**
5. **Total amount applied**
6. **Application month, day, and year**
7. **Location of the application**
8. **Crop or site receiving the application**
9. **Size of area treated**
10. **Training Requirement:** proof that the applicator completed training described in this section.
11. **Application Timing:** whether the applicator applied this product preemergence or, the number of days after planting if the applicator applied this product postemergence.
12. **Receipts of purchase:** receipts for the purchase of this product.
13. **Product Label:** a copy of this product label(s), and any state special local needs label that supplements this label.
14. **Sensitive Crops Awareness:** Document that the applicator checked an applicable sensitive crop registry; or document that the applicator surveyed neighboring fields for any sensitive areas or sensitive crops prior to application. At a minimum, records must include the date the applicator consulted the specialty crop registry or surveyed neighboring fields, and the name of the specialty crop registry the applicator consulted.
15. **Spray System Cleanout:** Document that the applicator complied with the section of this label titled: "**Spray System Equipment Clean-out**". At a minimum, records must include the date the applicator performed the required cleanout, and cleanout method that the applicator followed.
16. **Tank Mix Products:** a list of all products (pesticides, adjuvants, and other products) that the applicator tank mixed with this product for each application. Include EPA registration numbers in the case of any pesticides.

(continued)

RESTRICTED USE PESTICIDE

APPLICATION RECORD KEEPING AND TRAINING REQUIREMENTS *(continued)*

17. **Start and Finish Times:** the time the applicator begins and the time the applicator completes applications of this product.
18. **Nozzle Selection:** which spray nozzle the applicator used to apply this product, and the nozzle pressure the applicator set the sprayer to.
19. **Air Temperature:** the air temperature at boom height at the time the applicator starts and finishes applications of this product.
20. **Wind Speed and Direction:** the wind speed at boom height at the time the applicator starts and finishes applications of this product, and the wind direction at the time the applicator starts and finishes applications of this product.

Training Requirements

Prior to applying this product, all applicators must complete dicamba or auxin-specific training. If training is available and required by the state where the applicator intends to apply this product, the applicator must complete that training before applying this product in-crop. If your state does not require auxin or dicamba-specific training, then the applicator must complete dicamba or auxin-specific training provided by one of the following sources: a) a registrant of a dicamba product approved for in-crop use with dicamba-tolerant crops, or b) a state or state-authorized provider.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about **Personal Protective Equipment (PPE)** and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the WPS.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **24 hours**.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as, plants, soil, or water is:

- Coveralls worn over short-sleeved shirt and short pants
- Chemical-resistant footwear plus socks
- Waterproof gloves
- Chemical-resistant headgear for overhead exposure
- Protective eyewear

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

Pesticide Storage

Store in original container in a well-ventilated area separately from fertilizer, feed, and foodstuffs. Avoid cross-contamination with other pesticides. **Engenia® herbicide** freezes around 15° F and is stable under conditions of freezing and thawing. Product that has been frozen should be thawed and recirculated prior to use.

Pesticide Disposal

Wastes resulting from this product may be disposed of on-site or at an approved waste disposal facility. Pesticide, spray mixture, or rinsate that cannot be used according to label instructions must be disposed of according to federal, state or local procedures under **Subtitle C** of the **Resource Conservation and Recovery Act**. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law.

Container Handling

Nonrefillable Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Triple rinse containers too large to shake (capacity > 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

(continued)

STORAGE AND DISPOSAL *(continued)*

Container Handling *(continued)*

Pressure rinse as follows: Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable Container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

Triple rinse as follows: To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

In Case of Emergency

In case of large-scale spill of this product, call:

- CHEMTREC 1-800-424-9300
- BASF Corporation 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF Corporation 1-800-832-HELP (4357)

Steps to take if material is released or spilled:

- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

Product Information

Engenia® herbicide is a water-soluble herbicide that provides postemergence and moderate rate-dependent residual control of many annual broadleaf weeds. **Engenia** is also active on many biennial and perennial broadleaf weeds as well as woody brush and vines (refer to **Table 1** for weeds controlled or suppressed).

Engenia can be used in specific field and row crops, fallow and postharvest croplands, and sod farms. **Engenia** does not control grass weeds and must be used sequentially or tank mixed with a grass herbicide for a complete weed control program. See **Tank Mixing Information** section for important information on herbicide tank mixes or **Crop-specific Information** section(s) for recommendations on sequential programs.

Table 1. Weeds Controlled or Suppressed

Engenia will control or suppress the following weeds when used at rates described in **Table 2.**

Common Name	Scientific Name
Annuals	
Alkanet	*Lithospermum arvense*
Amaranth, Palmer	*Amaranthus palmeri*
Amaranth, Powell	*Amaranthus powellii*
Amaranth, spiny	*Amaranthus spinosus*
Aster, slender	*Aster subulatus*
Bedstraw, catchweed	*Galium aparine*
Beggarweed, Florida	*Desmodium tortuosum*
Broomweed, common	*Gutierrezia dracunculoides*
Buckwheat, tartary	*Fagopyrum tataricum*
Buckwheat, wild	*Polygonum convolvulus*
Buffalobur	*Solanum rostratum*
Burclover, California	*Medicago polymorpha*
Burcucumber	*Sicyos angulatus*
Buttercup, corn	*Ranunculus arvensis*
Buttercup, creeping	*Ranunculus repens*
Buttercup, roughseed	*Ranunculus muricatus*
Buttercup, western field	*Ranunculus occidentalis*
Carpetweed	*Mollugo verticillata*
Catchfly, nightflowering	*Silene noctiflorum*
Chamomile, corn	*Anthemis arvensis*
Chervil, bur	*Anthriscus caucalis*
Chickweed, common	*Stellaria media*
Clover	*Trifolium* spp.
Cockle, corn	*Agrostemma githago*
Cockle, cow	*Vaccaria pyramidata*
Cocklebur, common	*Xanthium strumarium*
Copperleaf, hophornbeam	*Acalypha ostryifolia*
Cornflower	*Centaurea cyanus*
Croton, tropic	*Croton glandulosus*
Croton, woolly	*Croton capitatus*
Daisy, English	*Bellis perennis*

(continued)

Table 1. Weeds Controlled or Suppressed *(continued)*

Common Name	Scientific Name
Annuals *(continued)*	
Dragonhead, American	*Dracocephalum parviflorum*
Eveningprimrose, cutleaf	*Oenothera laciniata*
Falseflax, smallseed	*Camelina microcarpa*
Fleabane, hairy	*Conyza bonariensis*
Flixweed	*Descurainia sophia*
Fumitory	*Fumaria officinalis*
Goosefoot, nettleleaf	*Chenopodium murale*
Hempnettle	Galeopsis tetrahit
Henbit	Lamium amplexicaule
Horseweed (Marestail)	*Conyza canadensis*
Jacob's-ladder	*Polemonium caeruleum*
Jimsonweed	*Datura stramonium*
Knawel (German moss)	*Scleranthus annuus*
Knotweed, prostrate	*Polygonum aviculare*
Kochia[3]	*Kochia scoparia*
Ladysthumb	*Polygonum persicaria*
Lambsquarters, common	*Chenopodium album*
Lettuce, miner's	*Claytonia perfoliata*
Lettuce, prickly	*Lactuca serriola*
Mallow, common	*Malva neglecta*
Mallow, Venice	*Hibiscus trionum*
Mayweed	*Anthemis cotula*
Morningglory, ivyleaf	*Ipomoea hederacea*
Morningglory, tall	*Ipomoea purpurea*
Mustard, black	*Brassica nigra*
Mustard, blue	*Chorispora tenella*
Mustard, tansy	*Descurainia pinnata*
Mustard, treacle	*Erysimum repandum*
Mustard, tumble	*Sisymbrium altissimum*
Mustard, wild	*Sinapis arvensis*
Mustard, yellowtop	*Sinapis* spp.
Nightshade, black	*Solanum nigrum*
Nightshade, cutleaf	*Solanum triflorum*
Pennycress, field	*Thlaspi arvense*
Pepperweed, Virginia	*Lepidium virginicum*
Pigweed, prostrate	*Amaranthus blitoides*
Pigweed, redroot (rough)	*Amaranthus retroflexus*
Pigweed, smooth	*Amaranthus hybridus*
Pigweed, tumble	*Amaranthus albus*
Pineappleweed	*Matricaria matricarioides*
Poorjoe	*Diodia teres*
Poppy, red horn	*Glaucium corniculatum*
Puncturevine	*Tribulus terrestris*
Purslane, common	*Portulaca oleracea*
Pusley, Florida	*Richardia scabra*
Radish, wild	*Raphanus raphanistrum*
Ragweed, common	*Ambrosia artemisiifolia*

(continued)

Table 1. Weeds Controlled or Suppressed *(continued)*

Common Name	Scientific Name
Annuals *(continued)*	
Ragweed, giant	*Ambrosia trifida*
Ragweed, lanceleaf	*Ambrosia bidentata*
Rocket, London	*Sisymbrium irio*
Rocket, yellow	*Barbarea vulgaris*
Rubberweed, bitter	*Hymenoxys odorata*
Salsify	*Tragopogon porrifolius*
Senna, coffee	*Senna occidentalis*
Sesbania, hemp	*Sesbania exaltata*
Shepherd's purse	*Capsella bursa-pastoris*
Sicklepod	*Cassia obtusifolia*
Sida, prickly (Teaweed)	*Sida spinosa*
Smartweed, green	*Polygonum scabrum*
Smartweed, Pennsylvania	*Polygonum pensylvanicum*
Sneezeweed, bitter	*Helenium amarum*
Sowthistle, annual	*Sonchus oleraceus*
Sowthistle, spiny	*Sonchus asper*
Spanish needles	*Bidens bipinnata*
Spikeweed, common	*Hemizonia pungens*
Spurge, prostrate	*Chamaesyce humistrata*
Spurry, corn	*Spergula arvensis*
Starbur, bristly	*Acanthospermum hispidum*
Starwort, little	*Stellaria graminea*
Sumpweed, rough	*Iva ciliata*
Sunflower, common (wild)	*Helianthus annuus*
Thistle, Russian	*Salsola iberica*
Velvetleaf	*Abutilon theophrasti*
Waterhemp	*Amaranthus tuberculatus*
Waterprimrose, winged	*Ludwigia decurrens*
Wormwood	*Artemisia annua*
Biennials	
Burdock, common	*Arctium minus*
Carrot, wild	*Daucus carota*
Cockle, white	*Melandrium album*
Eveningprimrose, common	*Oenothera biennis*
Geranium, Carolina	*Geranium carolinianum*
Gromwell	*Lithospermum* spp.
Knapweed, diffuse	*Centaurea diffusa*
Knapweed, spotted	*Centaurea maculosa*
Mallow, dwarf	*Malva borealis*
Plantain, bracted	*Plantago aristata*
Ragwort, tansy	*Senecio jacobaea*
Starthistle, yellow	*Centaurea solstitialis*
Sweetclover	*Melilotus* spp.
Teasel	*Dipsacus sativus*
Thistle, bull	*Cirsium vulgare*
Thistle, musk	*Carduus nutans*
Thistle, plumeless	*Carduus acanthoides*
Thistle, variegated (milk)	*Silybum marianum*

(continued)

Table 1. Weeds Controlled or Suppressed *(continued)*

Common Name	Scientific Name
Perennials[1]	
Alfalfa	*Medicago sativa*
Apple, tropical soda	*Solanum viarum*
Artichoke, Jerusalem	*Helianthus tuberosus*
Aster, spiny	*Aster spinosus*
Aster, whiteheath	*Aster pilosus*
Bedstraw, smooth	*Gallium mollugo*
Bindweed, field	*Convolvulus arvensis*
Bindweed, hedge	*Calystegia sepium*
Blueweed, Texas	*Helianthus ciliaris*
Bursage, woollyleaf	*Ambrosia grayi*
Buttercup, tall	*Ranunculus acris*
Campion, bladder	*Silene vulgaris*
Chickweed, field	*Cerastium arvense*
Chickweed, mouseear	*Cerastium vulgatum*
Chicory	*Cichorium intybus*
Clover, hop	*Trifolium aureum*
Dandelion, common	*Taraxacum officinale*
Dock, broadleaf (Bitterdock)	*Rumex obtusifolius*
Dock, curly	*Rumex crispus*
Dogbane, hemp	*Apocynum cannabinum*
Dogfennel (Cypressweed)	*Eupatorium capillifolium*
Fern, bracken	*Pteridium aquilinum*
Garlic, wild	*Allium vineale*
Goldenrod, Canada	*Solidago canadensis*
Goldenrod, Missouri	*Solidago missouriensis*
Goldenweed, common	*Isocoma coronopifolia*
Hawkweed	*Hieracium* spp.
Henbane, black	*Hyoscyamus niger*
Horsenettle, Carolina	*Solanum carolinense*
Ironweed	*Vernonia* spp.
Knapweed, black	*Centaurea nigra*
Knapweed, Russian	*Centaurea repens*
Lespedeza, sericea	*Lespedeza cuneata*
Milkweed, climbing	*Sarcostemma cyanchoides*
Milkweed, common	*Asclepias syriaca*
Milkweed, honeyvine	*Ampelamus albidus*
Milkweed, western whorled	*Asclepias subverticillata*
Nettle, stinging	*Urtica dioica*
Nightshade, silverleaf	*Solanum elaeagnifolium*
Onion, wild	*Allium canadense*
Plantain, broadleaf	*Plantago major*
Plantain, buckhorn	*Plantago lanceolata*
Pokeweed	*Phytolacca americana*
Ragweed, western	*Ambrosia psilostachya*
Redvine	*Brunnichia ovata*
Smartweed, swamp	*Polygonum coccineum*
Snakeweed, broom	*Gutierrezia sarothrae*

(continued)

Table 1. Weeds Controlled or Suppressed *(continued)*

Common Name	Scientific Name
Perennials[1] *(continued)*	
Sorrel, red (Sheep sorrel)	*Rumex acetosella*
Sowthistle, perennial	*Sonchus arvensis*
Spurge, leafy	*Euphorbia esula*
Sundrop	*Oenothera perennis*
Thistle, Canada	*Cirsium arvense*
Thistle, Scotch	*Onopordum acanthium*
Toadflax, Dalmatian	*Linaria genistifolia*
Trumpetcreeper	*Campsis radicans*
Vetch	*Vicia* spp.
Waterhemlock, spotted	*Cicuta maculata*
Waterprimrose, creeping	*Ludwigia peploides*
Woodsorrel, creeping	*Oxalis corniculata*
Woodsorrel, yellow	*Oxalis stricta*
Wormwood, Louisiana	*Artemisia ludoviciana*
Yankeeweed	*Eupatorium compositifolium*
Yarrow, common	*Achillea millefolium*
Woody Brush and Vines[1,2]	
Alder	*Alnus* spp.
Ash	*Fraxinus* spp.
Basswood	*Tilia americana*
Beech	*Fagus* spp.
Birch	*Betula* spp.
Cherry	*Prunus* spp.
Chinquapin	*Chrysolepis chrysophylla*
Cottonwood	*Populus deltoides*
Cucumbertree	*Magnolia acuminata*
Elm	*Ulmus* spp.
Grape	*Vitus* spp.
Hemlock	*Tsuga* spp.
Hickory	*Carya* spp.
Honeylocust	*Gleditsia triacanthos*
Honeysuckle	*Lonicera* spp.
Hornbeam	*Carpinus* spp.
Huckleberry	*Vaccinium arboreum*
Huisache	*Acacia farnesiana*
Ivy, poison	*Rhus radicans*
Kudzu	*Pueraria lobata*
Locust, black	*Robinia pseudoacacia*
Maple	*Acer* spp.
Mesquite	*Prosopis ruscifolia*
Oak	*Quercus* spp.
Oak, poison	*Rhus toxicodendron*
Olive, Russian	*Elaeagnus angustifolia*
Persimmon, eastern	*Diospyros virginiana*
Pine	*Pinus* spp.
Poplar	*Populus* spp.
Rabbitbrush	*Chrysothamnus pulchellus*

(continued)

Table 1. Weeds Controlled or Suppressed *(continued)*

Common Name	Scientific Name
Woody Brush and Vines[1,2] *(continued)*	
Rose, multiflora	*Rosa multiflorum*
Sassafras	*Sassafras albidum*
Serviceberry	*Amelanchier sanguinea*
Spicebush	*Lindera benzoin*
Spruce	*Picea* spp.
Sumac	*Rhus* spp.
Sycamore	*Platanus occidentalis*
Tarbush	*Flourensia cernua*
Willow	*Salix* spp.
Witchhazel	*Hamamelis macrophylla*

[1] Suppression only.
[2] Not for use in California.
[3] Except dicamba resistant.

Product Stewardship Practices

- Apply **Engenia® herbicide** to weeds 4 inches or less in size for best performance.
- Apply **Engenia** at the labeled rate. **DO NOT** apply at less than the labeled rate.
- Use **Engenia** as part of a herbicide program that includes the use of residual herbicides and herbicides with alternate sites of action to reduce resistance selection pressure.
- Select only EPA-approved nozzles that produce **extremely coarse to ultra-coarse** spray droplets. See **www.engeniatankmix.com** for the list of nozzles approved for use with this product.
- Maintain boom height 24 inches or less from target.
- Identify areas of sensitive nontarget plants and maintain proper setback distance from these areas.
- Thoroughly clean spray equipment before and after application.

Mode of Action

Dicamba, the active ingredient in **Engenia**, is a **Group 4** (WSSA) herbicide. Herbicides in this group mimic auxin (a plant hormone) resulting in a hormone imbalance in sensitive plants that interferes with normal plant growth (e.g. cell division, cell enlargement, and protein synthesis). **Engenia** is readily absorbed by leaves, roots, and shoots; translocates throughout the plant; and accumulates in areas of active growth to provide postemergence control of emerged weeds as well as moderate residual control of germinating weed seeds.

Any weed population may contain plants naturally resistant to **Group 4** herbicides. Weeds resistant to **Group 4** herbicides may be effectively managed using herbicide(s) from a different group and/or by using cultural or mechanical practices. Report any incidence of non-performance of this product against a particular weed species at www.EngeniaQuestions.com. Consult your local BASF representative, state cooperative extension service, professional consultants, or other qualified authority to determine appropriate actions if you suspect resistant weeds. Additional information about weeds which are known to be resistant to dicamba can be found at www.Resistance-Information.BASF.US.

Resistance Management

While weed resistance to **Group 4** herbicides is infrequent, populations of resistant biotypes are known to exist. Resistance management should be part of a diversified weed control strategy that integrates multiple options including chemical, cultural, and mechanical (tillage) control tactics. Cultural control tactics include crop rotation, proper fertilizer placement, optimum seeding rate/row spacing, and timely tillage.

To aid in the prevention of developing weeds resistant to this product, the following steps should be followed where practical:

- Start clean with tillage or an effective burndown herbicide program.
- **DO NOT** rely on a single herbicide site of action for weed control during the growing season.
- Scout fields before application to ensure herbicides and rates will be appropriate for the weed species and weed sizes present.
- Apply full labeled rates of **Engenia** for the most difficult-to-control weed in the field at the specified time (correct weed size) to minimize weed escapes.
- Use of preemergence herbicides that provide soil residual control of broadleaf and grass weeds is recommended to reduce early season weed competition and allow for more timely in-crop postemergence herbicide applications.
- Avoid application of herbicides with the same site of action more than twice a season.
- Scout fields after application to detect weed escapes or shifts in weed species.
- Report any incidence of non-performance of this product against a particular weed species to your BASF retailer, representative or online at www.EngeniaQuestions.com.
- If resistance is suspected, treat weed escapes with a herbicide having a mode of action other than **Group 4** and/or use non-chemical methods to remove escapes, as is practical, with the goal of preventing further seed production.
- For more information about weeds that are known to be resistant to dicamba go to www.Resistance-Information.BASF.US.

Additionally, users should follow as many of the following herbicide resistance management practices as is practical:

- Use a broad spectrum soil-applied herbicide with other modes of action as a foundation in a weed control program.
- Utilize sequential applications of herbicides with alternative modes of action.
- Rotate the use of this product with non-**Group 4** herbicides.
- Avoid making more than two applications of **Engenia** and any other **Group 4** herbicides within a single growing

season unless mixed with another mechanism of action with an overlapping spectrum for the difficult-to-control weeds.
- Incorporate non-chemical weed control practices, such as mechanical cultivation, crop rotation, cover crops and weed-free crop seeds, as part of an integrated weed control program.
- Thoroughly clean plant residues from equipment before and after leaving fields suspected to contain resistant weeds.
- Manage weeds in and around fields during and after harvest to reduce weed seed production.
- Contact the local agricultural extension service, BASF representative, ag retailer or crop consultant for further guidance on weed control practices as needed.

Crop Tolerance

Crops growing under normal environmental conditions are tolerant to **Engenia® herbicide** when applied according to label directions. Crop injury may occur under stressful growing conditions (e.g. low soil fertility, seedling disease, extreme hot or cold weather, excessive moisture, high soil pH, high soil salt concentration, drought).

Application Instructions

Apply **Engenia** by ground to actively growing weeds as a band, broadcast, or spot spray application for postemergence control of emerged weeds as well as moderate residual control of germinating weed seeds.

Make postemergence applications of **Engenia** when broadleaf weeds are small and actively growing. An adjuvant is recommended with **Engenia** for best postemergence activity; refer to **Tank Mixing Information** section and crop-specific information sections for details. Postemergence activity may be slowed or reduced under cloudy and/or foggy or cooler weather conditions, or when weeds are growing under drought or other stress conditions. When targeting dense weed populations and/or larger broadleaf weeds, use higher spray volumes and a higher application rate within an application rate range.

Cultivation should be delayed until 7 days after applying **Engenia** or a reduction in weed control may occur.

Use extreme care when applying **Engenia** to prevent injury to desirable plants. **Engenia** may cause injury to desirable sensitive plants when contacting their roots, stems, or foliage.

Application Rates

Always read and follow crop-specific use directions.

Table 2. Application Rate to Control or Suppress Target Weed by Weed Type and Growth Stage for Non-DT Use Sites

(See **Crop-specific Information** section for additional directions and exceptions)

Weed Type and Growth Stage	Rate/Acre[2,5] (fl ozs)
Annual	
Small, actively growing[1] (less than 4-inches tall)	3.2 to 12.8
Small, actively growing (less than 4-inches tall) plus moderate residual control	12.8
Biennial	
Rosette diameter 1 to 3 inches[1]	6.4 to 12.8
Rosette diameter more than 3 inches	12.8
Perennial[3,4]	
Top growth suppression	6.4 to 12.8
Top growth control and root suppression	12.8
Woody Brush and Vines[4]	
Top growth suppression	12.8

[1] Although rates below 12.8 fl ozs/A may provide adequate control of annual and biennial weeds, for optimum performance use listed rates or lower rates tank mixed with other herbicides that are effective on the same species and biotype.
[2] Use the higher rate within listed ranges when treating weeds resistant to other sites of action, dense vegetative growth, or weeds with a well-established root system. The higher rates also provide moderate residual annual weed control.
[3] Refer to **Table 1** for use on perennials in California.
[4] **Engenia** will suppress the top growth of herbaceous perennial and woody brush and vines and can be combined with other herbicides to improve control. Not for use in California.
[5] **DO NOT** broadcast-apply more than 12.8 fl ozs/A per application. Retreatment or tank mixes may be necessary for best control of some weeds. However, sequential applications must not exceed a maximum cumulative total of 51.2 fl ozs/A of **Engenia** (2 lbs dicamba ae/A) per year.

Application Methods and Equipment

Apply **Engenia® herbicide** by ground. Thorough spray coverage is important for best broadleaf weed control and can be improved with adjuvant, nozzle, and spray volume selection.

Calibrate application equipment for accurate target spray volume and application rate to ensure uniform distribution of spray and to avoid spray drift to nontarget areas. Adjust equipment to maintain continuous agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above the labeled use rates.

Engenia may be applied using water; consult crop-specific information sections of this label for other spray carrier options.

Ground Application

Banding Applications

When applying **Engenia** by banding, use the following formula to calculate the amount of herbicide and water volume needed:

$$\frac{\text{Bandwidth in inches}}{\text{Row width in inches}} \times \text{Broadcast rate per acre} = \text{Banding herbicide rate per acre}$$

$$\frac{\text{Bandwidth in inches}}{\text{Row width in inches}} \times \text{Broadcast volume per acre} = \text{Banding water volume per acre}$$

Broadcast Applications

Unless noted in the crop-specific information section, use a spray volume of 10 or more gallons of water per treated acre. Thorough coverage of existing vegetation is essential for postemergence applications; higher spray volumes may be necessary for optimum performance.

Wiper Applications

Engenia may be applied through wiper application equipment to control or suppress actively growing broadleaf weeds, brush, and vines. Use a 50% solution containing 1 part **Engenia** to 1 part water.

- **DO NOT** apply more than 12.8 fl ozs/A of **Engenia** [0.5 lb dicamba acid equivalent (ae) per acre] per application.
- **DO NOT** contact desirable vegetation with herbicide solution. Wiper application may be made to crops (including pastures) and noncropland areas described in this label.
  EXCEPTION: DO NOT use wiper application on non-dicamba-tolerant cotton or soybean.

Spray Drift Management

Avoiding spray drift at the application site is the responsibility of the applicator. The spray system and weather-related factors determine the potential for spray drift. The applicator is responsible for considering these factors when making application decisions to avoid spray drift onto nontarget areas.

Applicators must follow application requirements to avoid spray drift hazards, including those found in this labeling and applicable state and local regulations and ordinances. Where states have more stringent regulations, they must be observed.

All application equipment must be properly maintained and calibrated using appropriate carriers.

DO NOT allow herbicide solution to drip, physically drift, or splash onto desirable vegetation because severe injury or destruction to desirable broadleaf plants could result. The following physical spray drift management requirements must be followed.

Controlling Droplets

Drift potential may be reduced by applying large droplets that provide sufficient coverage and control. Applying larger droplets can reduce drift potential, but will not prevent drift if the application is made improperly, or under unfavorable environmental conditions (see the **Temperature Inversions** and the **Wind Speed and Direction Requirements** sections).

- **Nozzle Type** - Use the **Turbo TeeJet®** TTI11004 nozzle when applying **Engenia**. **DO NOT** use any other nozzle unless specifically allowed by label. To find a list of approved nozzles visit **www.engeniatankmix.com** no more than seven days prior to applying **Engenia**.
- **Pressure** - **DO NOT** exceed the nozzle manufacturer's specified pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate (large orifice) nozzles instead of increasing pressure. Ensure sprayer rate controller hardware (if so equipped) does not allow pressure increases above the desired range.
- **Spray Volume** - Apply this product in a minimum of 10 gallons of spray solution per acre. Use a higher spray volume when treating dense vegetation. Higher spray volumes may also allow the use of larger nozzle orifices (sizes) which produce coarser spray droplets.
- **Equipment Ground Speed** - Select a ground speed that will deliver the desired spray volume while maintaining the desired spray pressure, but **DO NOT** exceed a ground speed of 15 miles per hour. Slower speeds generally result in better spray coverage and deposition on the target area. It is recommended that ground speed be reduced to 5 miles per hour when making applications to the edge of the treatment area.
- **Spray Boom Height** - Spray at the appropriate boom height based on nozzle selection and nozzle spacing, but **DO NOT** exceed a boom height of 24 inches above target pest or crop canopy. Set boom to lowest effective height over the target pest or crop canopy based on equipment manufacturer's directions. Automated boom height controllers are recommended with large booms to better maintain optimum nozzle to canopy height. Excessive boom height will increase the potential for spray drift.
- **Hooded Spray Booms** - Hooded spray booms are another tool that can be used to minimize spray drift

potential. **Engenia® herbicide** may be applied using a hooded spray boom in combination with approved nozzles; however, the applicator must ensure the configuration is compatible with equipment used.

Temperature Inversions

- **DO NOT** apply **Engenia** when temperature inversions exist at the field level.
- **Apply only during the following period:** sunrise until sunset.

Temperature inversions increase drift potential because fine droplets may remain suspended in the air longer after application. Suspended droplets can move in unpredictable directions because of the light, variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light-to-no wind.

Inversions begin to form as the sun sets and often continue into the morning before surface warming. Their presence can be indicated by ground fog, smoke not rising, dust hanging over a road, or presence of dew or frost. Smoke that layers and moves laterally (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Inversion conditions typically dissipate with increased winds (above 3 MPH) or when surface air begins to warm (3° F from morning low).

Sensitive Areas

Engenia should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, or sensitive crop plants) is minimal (e.g. when the wind is blowing away from sensitive areas).

Maintain a 110 foot buffer when applying this product from the downwind outer edges of the field, less the distance of any of the adjacent areas specified below.

To maintain the required buffer zone:

- No application swath containing **Engenia** can be initiated in, or into an area that is within the applicable buffer distance.
- The following areas may be included in the buffer distance calculation when adjacent to field edges:
  1. Roads, paved or gravel surfaces.
  2. Agricultural fields that have been prepared for planting.
  3. Planted agricultural fields containing asparagus, corn, DT cotton, DT soybeans, sorghum, proso millet, small grains and sugarcane.
  4. Areas covered by the footprint of a building, shade house, silo, feed crib, or other man made structure with walls and or roof.

Sensitive Crops: Restrictions and precautions for the protection of sensitive crops.

- **DO NOT** apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or the crops thereof rendered unfit for sale, use or consumption.
- During application and sprayer clean-out **DO NOT** allow contact of herbicide with foliage, green stems, exposed non-woody roots of crops, and desirable plants.

In addition to the required 110 foot down wind spray buffer, additional protections are required for dicamba sensitive crops. **DO NOT** apply when wind is blowing in the direction of neighboring sensitive crops.

Sensitive crops include, but are not limited to:

- non-DT soybeans
- cucumber and melons (EPA **Crop Group 9**)
- flowers
- fruit trees
- grapes
- ornamentals including greenhouse-grown and shade house-grown broadleaf plants
- peanuts
- peas and beans (EPA **Crop Group 6**)
- peppers, tomatoes, and other fruiting vegetables (EPA **Crop Group 8**)
- potato
- sweet potato
- tobacco

Severe injury or destruction could occur if any contact between this product and these plants occurs.

Survey the area before spraying: Small amounts of spray drift that may not be visible may injure sensitive broadleaf plants. Applicators are required to ensure that they are aware of the proximity to sensitive areas, and to avoid potential adverse effects from off-target movement of **Engenia**. Before making an application, the applicator must survey the application site for neighboring sensitive areas. The applicator must also consult sensitive crop registries to locate nearby sensitive areas where available.

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR.

The interaction of equipment and weather related factors must be monitored to maximize performance and on-target spray deposition. The applicator is responsible for considering all of these factors when making a spray decision. The applicator is responsible for compliance with state and local pesticide drift regulations.

Wind Speed and Direction Requirements

- **Wind Speed** - 3 to10 mph
- **Wind Direction** - Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect drift.

Spray System Equipment Clean-out

As part of the Restricted Use Product requirements, applicators must document that they have complied with the **Spray System Equipment Clean-out** section of this label.

The applicator must ensure that the spray system used to apply **Engenia® herbicide** is clean before application. Small quantities of ammonium sulfate (AMS) can increase the volatility potential of **Engenia**.

Severe crop injury may occur if any **Engenia** remains in the spray equipment following application and is subsequently applied to sensitive crops. After using **Engenia**, clean all mixing and spray equipment (including tanks, pumps, lines, filters, screens, and nozzles) with a strong detergent based sprayer cleaner. Dispose of rinsate in compliance with local, state, and federal guidelines.

1. After spraying, drain the sprayer (including boom and lines). Avoid allowing the spray solution to remain in the spray boom lines overnight or for extended periods of time.
2. Flush tank, hoses, boom, and nozzles with clean water. Open boom ends and flush if so equipped.
3. Inspect and clean all strainers, screens, and filters.
4. Use commercial sprayer cleaner containing strong detergents according to the manufacturer's directions.
5. Wash all parts of the tank, including the inside top surface. Start agitation in the sprayer and thoroughly recirculate the cleaning solution for at least 15 minutes. All visible deposits must be removed from the spraying system.
6. Flush hoses, spray lines, and nozzles with the cleaning solution for at least 1 minute. Remove nozzles, screens, and strainers, and clean separately in the cleaning solution after completing the above procedure.
7. Drain pump, filter, and lines.
8. Rinse the complete spraying system with clean water.
9. Clean and rinse the exterior of the sprayer.
10. Appropriately dispose of all rinsate in compliance with local, state, and federal requirements.

Tank Mixing Information

Engenia may only be tank-mixed with products that have been tested and found by the EPA not to have an unreasonable adverse effect on the spray drift properties of **Engenia**. A list of those EPA approved products may be found at **www.engeniatankmix.com**. **DO NOT** tank mix any product with **Engenia** unless:

1. You check the list of EPA approved products for use with **Engenia** at **www.engeniatankmix.com** no more than 7 days before applying **Engenia**; and
2. The intended product tank-mix with **Engenia** is identified on that list of tested and approved products; and
3. The intended product to be tank-mixed with **Engenia** is not prohibited on this label.
4. Additional Warnings and Restrictions:
   - Some COC, HSOC and MSO adjuvants may cause a temporary crop response.
   - **DO NOT** tank mix products containing ammonium salts such as ammonium sulfate and urea ammonium nitrate.
   - **DO NOT** add adjuvants that will further decrease pH or acidify the spray solution.
   - Hard water does not usually affect the activity of **Engenia**; however, other tank mix components may be adversely affected (e.g. glyphosate). Use of an approved conditioning agent should be considered when hard water (i.e. total calcium, magnesium, and iron content above 500 ppm) is used as a spray carrier.
   - Use of an approved neutral buffering agent may be warranted if the water source or tank mix components will create an acidic spray solution less than pH 5.
   - Drift reduction agents listed on the website above can minimize the percentage of driftable fines. However, the applicator must check with the DRA manufacturer to determine if the approved DRA will work effectively with the spray nozzle, the spray pressure, and the desired spray solution.

For an up to date and complete list of approved tank mix options with **Engenia**, visit **www.engeniatankmix.com**.

Refer to the tank mix product labels to confirm that the respective tank mix products are registered for the specific crop use; follow required crop rotation restrictions. Read and follow the applicable restrictions and limitations and **Directions For Use** on all product labels involved in tank mixing. Always follow the most restrictive label use directions; refer to crop-specific information section for details.

Mixing **Engenia** with postemergence grass (graminicide) herbicides may reduce the effectiveness of those products. Follow graminicide label when mixing with **Engenia** to ensure optimum weed control. Physical incompatibility, reduced weed control, or crop injury may result from mixing **Engenia** with other pesticides, additives, nutritionals, etc.

Adjuvants. BASF recommends the use of quality adjuvants with **Engenia** such as **Astonish™**, **Class Act® Ridion®**, **Grounded®**, **Iconic®**, **Jackhammer™ Elite**, **R-11®**, **Strike Force®**, and **Verifact**.

Compatibility Test for Mix Components

Before mixing components, always perform a compatibility jar test.

1. For 20 gallons per acre spray volume, use 3.3 cups (800 mL) of water. For other spray volumes, adjust rates accordingly. Only use water from the intended source at the source temperature.
2. Add components in the sequence indicated in the following **Mixing Order** instructions using 2 teaspoons for each pound or 1 teaspoon for each pint of labeled use rate per acre.
3. Cap the jar and invert 10 cycles between component additions.

4. When the components have all been added to the jar, let the solution stand for 15 minutes.
5. Evaluate the solution for uniformity and stability. The spray solution should not have free oil on the surface; fine particles that precipitate to the bottom; or thick (clabbered) texture. If the spray solution is not compatible, repeat the compatibility test with the addition of a suitable compatibility agent. If the solution is then compatible, use the compatibility agent as directed on its label. If the solution is still incompatible, **DO NOT** mix the ingredients in the same tank.

Mixing Order

Make sure each component is thoroughly mixed and suspended before adding tank mix partners. Except when mixing products in PVA bags, maintain constant agitation during mixing and application.

1. **Water** - Begin by agitating a thoroughly clean sprayer tank 1/2 to 3/4 full of clean water.
2. **Inductor** - If an inductor is used, rinse it thoroughly after each component has been added.
3. **Products in PVA bags** - Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
4. **Water-soluble additives**
5. **Water-dispersible products** (such as dry flowables, wettable powders, suspension concentrates, or suspo-emulsions)
6. **Water-soluble products and additives (Engenia® herbicide)**
7. **Emulsifiable concentrates** (including NIS and oil concentrate)
8. Remaining quantity of water

Maintain continuous and constant agitation throughout mixing and application until spraying is completed. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed. Continue agitation while spraying.

Use Precautions

- **Maximum Seasonal Use Rate** - Refer to crop-specific information sections for maximum seasonal application rates for each crop or use pattern.
- **Stress** - Application to crops under stress because of lack of moisture, hail damage, flooding, herbicide injury, mechanical injury, or widely fluctuating temperatures may result in crop injury.
- **Rainfast Period** - **Engenia** is rainfast 4 hours after application. Postemergence activity may be reduced if rain or irrigation occurs within 4 hours of application.

Use Restrictions

Applicator MUST ALSO follow restrictions under Crop-specific Information section(s).

- **DO NOT** apply this product aerially.
- **DO NOT** apply **Engenia** with ammonium-containing additives, conditioners, or fertilizers (e.g. AMS, UAN). Small quantities of AMS can greatly increase the volatility potential of dicamba.
- **DO NOT** apply **Engenia** if rain is expected within 24 hours after application.
- Apply **Engenia** at wind speeds between 3 and 10 mph.
- Apply **Engenia** only during the following period: sunrise until sunset.
- **DO NOT** contaminate irrigation ditches or water used for domestic purposes.
- **DO NOT** apply **Engenia** through any type of irrigation system (e.g. chemigation).
- **DO NOT** tank mix **Engenia** with **Lorsban® insecticide**.

Crop Rotation Restrictions

Use the following information to determine the required interval between **Engenia** application and rotational crop planting as well as replanting after crop failure because of environmental factors such as drought, frost, or hail. Determine the rotational crop interval for tank mix products and use the most restrictive interval of all products applied.

Table 3. Crop Rotation Restrictions by Application Rate

Crop	Engenia® herbicide (fl ozs/A)		
	≤ 6.4	9.6	12.8
	Rotational Crop Interval[1] (days after application)		
Corn	0	0	0
Cotton, non-DT[2]	21[†]	28	42
Cotton, DT	0	0	0
Sorghum	14	21	28
Soybean, non-DT[2]	14	21	28
Soybean, DT	0	0	0
Grasses[3] 30 inches or more annual precipitation	14	21	28
Grasses[3] less than 30-inches annual precipitation	21	28	42
All other crops	120	120	120

[1] **DO NOT** include time when the soil is frozen and days before receiving any required rainfall or overhead irrigation.
[2] Following application of **Engenia** and a minimum accumulation of 1 inch of rainfall or overhead irrigation, observe the indicated waiting interval.
[3] Includes barley, oats, wheat, and other grass crops. Small grains may be planted with no waiting interval following **Engenia** applied at 3.2 fl ozs/A.
[†] **Missouri and Tennessee Only.** Following application of **Engenia**, wait until an accumulation of 1 inch of rainfall or irrigation followed by an interval of **14 days** per 6.4 fl ozs/A or less before planting cotton. This interval must be observed before planting cotton or severe crop injury may occur.

Engenia® herbicide is EPA approved for use in DT crops in the following states, subject to county restrictions as noted:

Alabama, Arizona, Arkansas, Colorado, Delaware, Florida (excluding Palm Beach County), Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee (excluding Wilson County), Texas, Virginia, West Virginia, Wisconsin.

The following directions are specific for Engenia use in DT cotton and DT soybeans.

Depending on specific crop application directions, **Engenia** may be applied for postemergence control of emerged broadleaf weeds and/or residual control of germinating broadleaf weed seeds before crop planting (preplant and/or preseed) and after planting (preemergence, postemergence). Refer to **Table 1** for list of weeds controlled or suppressed.

Engenia may be applied preplant, at-planting, preemergence, and postemergence (in-crop) for weed control in DT cotton and DT soybeans.

Dicamba-tolerant (DT) Cotton

Engenia may be applied preplant surface, preemergence, or postemergence (over the top) to control or suppress many annual, biennial, and perennial broadleaf weeds (see **Table 1**) in dicamba-tolerant (DT) cotton. If **Engenia** is applied to non-dicamba-tolerant cotton other than as directed, severe crop injury will result. For non-dicamba-tolerant cotton information, see **Cotton** section in **Crop-specific Information** section.

Application Rates and Timings

Maximum Application Rates in DT Cotton

Application Timing	Amount (fl ozs/A)
Single Preplant Preemergence Postemergence	12.8 (0.5 lb dicamba ae/A)
All Applications Combined Total per Season	51.2 (2 lbs dicamba ae/A)
Total Preplant and **Preemergence**	25.6 (1 lb dicamba ae/A)
Total Postemergence	51.2 (2 lbs dicamba ae/A)

Application of **Engenia** plus specified adjuvants (refer to **Tank Mixing Information** section for details) may be made before and after cotton emergence. Separate sequential applications by 7 days or more. For best performance, apply **Engenia** when weeds are less than 4 inches in height and rosettes are less than 2-inches across. Timely application will improve control and reduce weed competition. Apply preplant, preemergence, and postemergence to DT cotton only by ground. **DO NOT** apply more than 51.2 fl ozs/A of **Engenia** per year (single growing season).

Preplant and Preemergence Applications

Engenia can be applied at 12.8 fl ozs/A before, during, or after planting DT cotton. **Engenia** will provide burndown of emerged weeds. Apply as a sequential application with other preemergence herbicides to control emerged grass weeds and other broadleaf weeds, and with a preemergence residual herbicide to control germinating weed seeds. Early season weed control is critical for minimizing weed competition and protecting crop yield potential.

Postemergence Applications

Apply **Engenia** postemergence at 12.8 fl ozs/A from cotton emergence up to 7 days before harvest. **DO NOT** apply more than 12.8 fl ozs/A in a single postemergence over-the-top application of **Engenia**.

For best weed control, **Engenia** applications should be made early in the season to small (less than 4-inches tall), actively growing weeds. Sequential postemergence applications may be necessary to control new weed flushes. Allow at least 7 days between applications. Avoid application of **Engenia** more than twice in a season to reduce resistance-selection pressure. Apply **Engenia** in a herbicide program that includes sequential application of herbicides with a different mechanism of action to control new weed regrowth.

Postemergence applications of **Engenia** mixed with some adjuvants may cause injury to DT cotton (see **Tank Mixing Information** section for details). Injury symptoms usually appear as necrotic spots on leaves. Potential for injury may be reduced when applications are made with spray volumes of at least 15 GPA and lower adjuvant rates. Symptomology is temporary with cotton recovering quickly after application.

Apply **Engenia** preplant, preemergence, and postemergence over the top by ground only.

Harvest Aid Applications

Engenia may be used for harvest aid in DT cotton. Apply **Engenia** as a broadcast spray by ground only. Applications must adhere to ground application requirements in this label; see the **Application Methods and Equipment** section. Apply **Engenia** at least 7 days before harvest.

Use with Other Herbicides

Broad-spectrum control of grass weeds or additional broadleaf weeds may require a sequential herbicide application. **Engenia® herbicide** may be applied sequentially with one or more of, but not limited to, the following herbicide products:

- **Outlook® herbicide**
- **Prowl® H2O herbicide**
- glyphosate (e.g. **Roundup® herbicide**)

For approved tank mix options see **www.engeniatankmix.com**.

DT Cotton Restrictions

- **DO NOT** apply **Engenia** to non-dicamba-tolerant cotton varieties other than as directed or severe cotton injury will occur; refer to **Cotton** section in **Crop-specific Information** section.
- **DO NOT** apply harvest aid application of **Engenia** within 7 days of harvest.
- Use caution when tank mixing **Engenia** with approved emulsifiable concentrates (EC) or oil-based products that may increase the potential for crop injury.

Dicamba-tolerant (DT) Soybean

Engenia may be applied preplant surface, preemergence, or postemergence (over the top) to control or suppress many annual, biennial, and perennial broadleaf weeds (see **Table 1**) in dicamba-tolerant (DT) soybean. If **Engenia** is applied to non-dicamba-tolerant soybean other than as directed, severe crop injury will result. For non-dicamba-tolerant soybean information, see **Soybean** section in **Crop-specific Information** section.

Application Rates and Timings

Maximum Application Rates in DT Soybean

Application Timing	Amount (fl ozs/A)
Single Preplant Preemergence Postemergence	12.8 (0.5 lb dicamba ae/A)
All Applications Combined Total per Season	51.2 (2 lbs dicamba ae/A)
Total Preplant and **Preemergence**	25.6 (1 lb dicamba ae/A)
Total Postemergence	25.6 (1 lb dicamba ae/A)

Application of **Engenia** plus specified adjuvants (refer to **Tank Mixing Information** section for details) may be made before and after soybean emergence. Separate sequential applications by 7 days or more. For best performance, apply **Engenia** when weeds are less than 4 inches in height and rosettes are less than 2-inches across. Timely application will improve control and reduce weed competition. Apply preplant, preemergence, and postemergence to DT soybean only by ground.

Preplant and Preemergence Applications

Engenia can be applied at 12.8 fl ozs/A before, during, or after planting dicamba-tolerant soybean. **Engenia** will provide burndown of emerged weeds and moderate residual activity. Apply as a sequential application with other labeled herbicides to control emerged grass weeds and other broadleaf weeds, and with a preemergence residual herbicide to control germinating weed seeds. Early season weed control is critical for minimizing weed competition and protecting crop yield potential.

Postemergence Applications

Up to two postemergence applications using 12.8 fl ozs/A of **Engenia** per application may be made from soybean emergence up to and including beginning bloom (R1 growth stage of soybeans). Allow at least 7 days between applications. However, **DO NOT** apply more than a maximum cumulative total of 25.6 fl ozs/A of **Engenia** postemergence.

Engenia applications should be made to small (less than 4-inches tall), actively growing weeds. Sequential postemergence applications may be necessary to control new weed flushes. For best results, apply **Engenia** in a herbicide program that includes sequential application of herbicides with a different mechanism of action to control new weed growth.

Postemergence applications of **Engenia** may cause dicamba-tolerant soybeans to wilt or droop shortly after application. Symptomology is transient, and soybeans recover quickly after application.

Use with Other Herbicides

Broad-spectrum control of grass weeds or additional broadleaf weeds may require a sequential herbicide application. **Engenia® herbicide** may be applied sequentially with one or more of, but not limited to, the following herbicide products:

- **Optill® powered by Kixor® herbicide**
- **Outlook® herbicide**
- **Prowl® H2O herbicide**
- **Pursuit® herbicide**
- **Raptor® herbicide**
- **Sharpen® powered by Kixor® herbicide**
- **Varisto® herbicide**
- **Verdict® powered by Kixor® herbicide**
- **Zidua® herbicide**
- **Zidua® PRO powered by Kixor® herbicide**
- clethodim (e.g. **Select Max® herbicide**)
- glyphosate (e.g. **Roundup® herbicide**)

For approved tank mix options see **www.engeniatankmix.com**.

DT Soybean Restrictions

- **DO NOT** apply **Engenia** to non-dicamba-tolerant soybean varieties other than as directed or severe soybean injury will occur; refer to **Soybean** section in **Crop-specific Information** section.
- **DO NOT** apply **Engenia** to soybeans after first bloom (R1).
- Use caution when tank mixing **Engenia** with approved emulsifiable concentrates (EC) or oil-based products that may increase the potential for crop injury.
- Allow at least 7 days between final application and harvest or feeding of soybean forage.
- Allow at least 14 days between final application and harvest or feeding of soybean hay.

This section provides use directions for **Engenia® herbicide** in conventional (non-DT) crops. Read product information, application instructions, weeds controlled, and additive instructions in preceding sections of the label.

Depending on specific crop application directions, **Engenia** may be applied for postemergence control of emerged broadleaf weeds and/or residual control of germinating broadleaf weed seeds before crop planting (preplant and/or preseed) and after planting (preemergence, postemergence). Refer to **Table 1** for list of weeds controlled or suppressed.

Asparagus

Engenia may be applied immediately after cutting asparagus but at least 24 hours before the next cutting. Apply 6.4 to 12.8 fl ozs/A of **Engenia** in 40 to 60 gallons of diluted spray to emerged and actively growing weeds. Apply 12.8 fl ozs/A of **Engenia** to control common chickweed, field bindweed, nettleleaf goosefoot, and wild radish. To improve control of Canada thistle and field bindweed, apply **Engenia** in combination with glyphosate (e.g. **Roundup® herbicide**) or sequentially with 2,4-D.

If spray contacts emerged spears, crooking (twisting) of some spears may result. If crooking occurs, discard affected spears.

Asparagus Restrictions

- **DO NOT** apply more than a total of 12.8 fl ozs/A of **Engenia** (0.5 pound dicamba ae/A) per year in asparagus.
- **DO NOT** harvest for 24 hours after treatment.
- **DO NOT** use in the Coachella Valley of California.

Between Crop Application

Engenia may be used as a burndown treatment to control broadleaf weeds at any time of the year during the fallow period following crop harvest and before the following crop is planted. Apply **Engenia** as a broadcast or spot treatment to emerged and actively growing weeds after crop harvest (postharvest) and before a killing frost, or in fallow cropland or crop stubble the following spring or summer.

Application Rates and Timings

Apply **Engenia** as a broadcast or spot treatment at 3.2 to 12.8 fl ozs/A plus specified adjuvants; see **Tank Mixing Information** section for details. Refer to **Table 2** to determine use rates for specific targeted weed species. For best performance, apply **Engenia** when annual weeds are less than 4-inches tall, when biennial weeds are in the rosette stage, and to perennial weed regrowth in late summer or fall following a mowing or tillage treatment. For the most effective control of upright perennial broadleaf weeds such as Canada thistle and Jerusalem artichoke, apply **Engenia** when the majority of weeds have at least 4 inches of regrowth, or for weeds such as field bindweed and hedge bindweed that are in or beyond the full bloom stage.

Avoid disturbing treated areas following application. Treatments may not kill weeds that develop from seed or underground plant parts, such as rhizomes or bulblets, after the effective period for **Engenia**. For seedling control, a follow-up program or other cultural practices should be instituted. For small grain in-crop uses of **Engenia**, refer to **Small Grain** section for details.

Specific crop rotation intervals must be observed between an application of **Engenia** and planting the following crop; see **Crop Rotation Restrictions** in **Use Restrictions** section.

Use with Other Herbicides

Broad-spectrum burndown control of grass weeds and/or additional broadleaf weeds requires another herbicide. **Engenia** may be applied sequentially with one or more of, but not limited to, the following herbicide products:

- **Distinct® herbicide**
- **Facet® L herbicide**
- **Outlook® herbicide**
- **Sharpen® powered by Kixor® herbicide**
- **Verdict® powered by Kixor® herbicide**
- 2,4-D
- glyphosate (e.g. **Roundup**)

For approved tank mix options see **www.engeniatankmix.com.**

Between Crop Application Restrictions

- **DO NOT** apply more than 12.8 fl ozs/A (0.5 pound dicamba ae/A) in a single application of **Engenia** as a between crop application.
- **DO NOT** apply more than a maximum cumulative total of 2 pounds dicamba ae/A from all product sources per cropping season.

Conservation Reserve Program (CRP)

Engenia may be used on both newly seeded and established grasses grown in the Conservation Reserve or federal Set-Aside Programs. Treatment with **Engenia** will injure or may kill alfalfa, clovers, lespedeza, wild winter peas, vetch, and other legumes.

Application Rates and Timings

Engenia may be applied at 3.2 to 12.8 fl ozs/A; refer to **Table 2** for rates based on target weed type and growth stage.

Newly Seeded Areas

Engenia may be applied either preplant or postemergence to newly seeded grasses or small grain such as barley, oats, rye, sudangrass, wheat, or other grain species grown

as a cover crop. Postemergence application may be made after seedling grasses exceed the 3-leaf stage.

Preplant Intervals. Preplant applications at 12.8 fl ozs/A may injure new seedings if the interval between application and grass planting is less than:

- 20 days - 30 inches or more annual precipitation
- 45 days - less than 30-inches annual precipitation

Established Grass Stands

Established grass stands are perennial grasses planted one or more seasons before treatment. Certain species (bentgrass, buffalograss, carpetgrass, St. Augustinegrass, or smooth brome) may show a response when treated with **Engenia® herbicide.**

Use with Other Herbicides

Broad-spectrum control of broadleaf and grass weeds requires another herbicide. **Engenia** may be applied sequentially with one or more of, but not limited to, the following herbicide products:

- **Facet® L herbicide**
- atrazine
- glyphosate (e.g. **Roundup® herbicide**)
- paraquat (e.g. **Gramoxone® SL herbicide**)

For approved tank mix options see **www.engeniatankmix.com**.

CRP Restrictions

- **DO NOT** apply more than 12.8 fl ozs/A of **Engenia** per application.
- **DO NOT** apply more than a maximum cumulative total of 51.2 fl ozs/A of **Engenia** (2 lbs dicamba ae/A) per season.
- **Engenia** may injure newly seeded grasses and certain species, such as bentgrass, buffalograss, carpetgrass, St. Augustinegrass, or smooth brome.

Corn (field, seed, silage) and Popcorn

Engenia may be applied preplant surface, preemergence, or postemergence to corn. Corn in this label refers to conventional or herbicide-tolerant field corn (grown for grain, seed, or silage) and popcorn. Before applying **Engenia** to seed corn or popcorn, verify with your local seed company (supplier) the selectivity of **Engenia** on your inbred line or hybrid to help avoid potential injury to sensitive inbreds or hybrids.

Engenia is not registered for use on sweet corn.

Direct contact of **Engenia** with corn seed must be avoided. If corn seeds are less than 1.5 inches below the soil surface, delay application until corn has emerged.

Postemergence applications of **Engenia** to corn during periods of rapid growth may result in temporary leaning. Corn will usually become erect within 3 to 7 days. To avoid breakage, delay cultivation until after corn is growing normally.

Application Rate

Engenia application rates vary by soil texture, organic matter, and application timing. Refer to **Table 4** for **Engenia** application rates by application timing. Up to 2 applications of **Engenia** may be made during a growing season. Sequential applications must be separated by 2 weeks or more.

Table 4. Engenia Application Rates for Corn

Soil Texture	Organic Matter	Application Rate (fl ozs/A)			
		Preplant/ Preemergence[2]	Preemergence	Postemergence	
		No Tillage	Conventional/ Reduced Tillage	Early[3]	Late[4]
Coarse[1]	All	6.4	NA	6.4	6.4
Medium/Fine	2.5% or less	6.4	NA	12.8	6.4
Medium/Fine	more than 2.5%	12.8	12.8	12.8	6.4

[1] Coarse soil types include sand, loamy sand, or sandy loam.
[2] Use only preemergence applications in conventional and reduced tillage systems.
[3] Apply between corn emergence and the 5-leaf stage or 8-inches tall, whichever comes first. Use crop oil concentrate only in dry conditions when corn is less than 5-inches tall and when applying **Engenia** alone or tank mixed with atrazine.
[4] Apply in corn that is 8-inches to 36-inches tall or up to 15 days before tassel emergence, whichever comes first.
NA - not applicable

Application Timing

Preplant (up to 14 days before planting) and Preemergence Applications in No Tillage Corn

Engenia® herbicide can be applied to emerged weeds before, during, or after planting a corn crop. When planting into a legume sod (e.g. alfalfa or clover), apply **Engenia** after 4 inches of regrowth. For application rates, refer to **Table 4**.

Preemergence Applications in Conventional or Reduced Tillage Corn

Engenia may be applied after planting and before corn emergence; refer to **Table 4** for application rates. Preemergence application of **Engenia** does not require mechanical incorporation to become active. A shallow mechanical incorporation is recommended if the application is not followed by adequate rainfall or sprinkler irrigation. Avoid tillage equipment (e.g. drags, harrows) that concentrates treated soil over seed furrow or seed damage could result.

Postemergence Applications (all tillage systems)

Apply early postemergence treatment between corn emergence and the 5-leaf stage or 8-inches tall, whichever comes first. Apply later applications when corn is 8-inches to 36-inches tall, or up to 15 days before tassel emergence, whichever comes first. Apply as a directed spray when corn leaves prevent proper spray coverage. Application rates vary by application timing; refer to **Table 4** for specific postemergence application rates.

Use with Other Herbicides

Engenia may be applied sequentially with one or more of, but not limited to, the following herbicide products:

- **Armezon® herbicide**
- **Armezon® PRO herbicide**
- **Outlook® herbicide**
- **Prowl® H2O herbicide**
- **Sharpen® powered by Kixor® herbicide**
- **Verdict® powered by Kixor® herbicide**
- **Zidua® herbicide**
- atrazine
- glyphosate (e.g. **Roundup® herbicide**)

For approved tank mix options see **www.engeniatankmix.com**.

NOTE: Refer to tank mix product labels to confirm the respective tank mix products are registered for use on specific corn types. Not all corn products are registered on popcorn and seed corn.

Corn and Popcorn Restrictions

- **DO NOT** apply more than 12.8 fl ozs/A (0.5 pound dicamba ae/A) in a single application of **Engenia**.
- **DO NOT** apply more than a maximum cumulative total of 1.5 pounds dicamba ae/A from all product sources per cropping season.
- Corn or popcorn forage and silage may be harvested, fed, or grazed when the crop has reached the ensilage (milk) stage or later in maturity.
- **Engenia is not registered for use on sweet corn.**

Cotton

Before planting cotton, **Engenia** may be used early preplant for burndown of actively growing broadleaf weeds; refer to **Table 1** for weeds controlled or suppressed.

Application Rates and Timings

Apply **Engenia** as a broadcast spray up to 6.4 fl ozs/A plus specified adjuvants; refer to **Tank Mixing Information** section for details. For best performance, apply **Engenia** when weeds are less than 4 inches in height and rosettes are less than 2-inches across.

Following application of **Engenia**, wait until an accumulation of 1 inch of rainfall or irrigation followed by an interval of 21 days per 6.4 fl ozs/A or less before planting cotton. This interval must be observed before planting cotton or severe crop injury may occur.

Missouri and Tennessee Only. Following application of **Engenia**, wait until an accumulation of 1 inch of rainfall or irrigation followed by an interval of **14 days** per 6.4 fl ozs/A or less before planting cotton. This interval must be observed before planting cotton or severe crop injury may occur.

Use with Other Herbicides

Broad-spectrum postemergence control of grass weeds or additional broadleaf weeds requires another herbicide such as glyphosate. **Engenia** may be applied sequentially with one or more of, but not limited to, the following herbicide products:

- **Sharpen**
- glyphosate (e.g. **Roundup**)

For approved tank mix options see **www.engeniatankmix.com**.

Cotton Restrictions

- **DO NOT** apply more than 6.4 fl ozs/A (0.25 pound dicamba ae/A) of **Engenia® herbicide** per year (single growing season).
- **DO NOT** apply preplant to cotton west of Interstate 25.
- **DO NOT** make **Engenia** preplant application to cotton in geographic areas with average annual rainfall less than 25 inches.
- **DO NOT** apply more than 2 pounds dicamba acid equivalent per acre for the combination of treatments if applying a spring preplant treatment following application of a fall preplant (postharvest) treatment.
- Cotton gin byproducts may be fed to livestock.

Grass Grown for Seed

Engenia may be used to control annual and perennial broadleaf weeds after weed emergence. For best performance, apply **Engenia** when weeds are less than 4 inches in height and rosettes are less than 2-inches across. Apply **Engenia** at 6.4 to 12.8 fl ozs/A plus specified adjuvants to seedling grasses after the crop reaches 3-leaf to 5-leaf stage; see **Tank Mixing Information** section for details. Apply up to 12.8 fl ozs/A of **Engenia** on well-established perennial grasses. Use the higher rate of the listed rate range when treating more mature weeds or dense vegetative growth.

Use with Other Herbicides

Engenia may be applied sequentially with one or more of, but not limited to, the following herbicide products:

- **Facet® L herbicide**
- **Prowl® H2O herbicide**

For approved tank mix options see **www.engeniatankmix.com**.

Grass Grown for Seed Restrictions

- **DO NOT** apply **Engenia** after grass seed crop begins to joint.
- **DO NOT** apply more than 12.8 fl ozs/A of **Engenia** (0.5 lb dicamba ae/A) per application or a cumulative total of 51.2 fl ozs/A of **Engenia** (2 lbs dicamba ae/A) per season.
- Refer to **Table 5** for grazing restrictions.

Pasture, Hay, Rangeland, and Farmstead (noncropland)

Engenia may be used on pasture, hay, rangeland, and farmstead including fencerows and nonirrigation ditchbanks for control or suppression of broadleaf weed and woody brush and vine species listed in **Table 1**. **Engenia** uses described in this section also refer to small grain grown for forage pasture use (rye, sorghum, sudangrass, or wheat). Grazing and harvest intervals are shown in **Table 5**.

Engenia may also be applied to noncropland areas to control broadleaf weeds in noxious weed control programs, districts, or areas including broadcast or spot treatment of roadsides, highways, utilities, railroad, and pipeline rights-of-way. Noxious weeds must be recognized at the state level, but programs may be administered at state, county, or other level.

Application Rates and Timings

Refer to **Table 2** for rate selection based on targeted weed or brush species. Some weed species will require a tank mix partner for adequate control. Retreatments may be applied as needed.

For approved tank mix options see **www.engeniatankmix.com**.

DO NOT apply more than 25.6 fl ozs/A of **Engenia** during a growing season.

DO NOT apply more than 12.8 fl ozs/A of **Engenia** during a growing season on small grain grown for pasture and newly seeded areas.

Established grass crops growing under stress can exhibit various injury symptoms that may be more pronounced if herbicides are applied. Bentgrass, buffalograss, carpetgrass, and St. Augustinegrass may show a response. Usually, colonial bentgrasses are more tolerant than creeping types. Velvetgrasses are most easily injured. Treatments will injure or kill alfalfa, clovers, lespedeza, wild winter peas, vetch, and other legumes.

Spray volume may range from 10 to 600 gallons per acre. The volume of spray applied depends on the height, density, and type of weeds or brush being treated and on the type of equipment used. **Engenia** may be applied as a spot treatment to individual clumps or small areas of undesirable vegetation using a handgun or similar type of application equipment. Apply diluted sprays to allow complete wetting (up to runoff) of foliage and stems.

Table 5. Grazing and Haying Restrictions for Lactating Dairy Animals after Engenia® herbicide Treatment

Engenia Rate (fl ozs/A)	Days before Grazing	Days before Hay Harvest
Up to 12.8	7	37

Cut-surface Treatment

Engenia may be applied as a cut-surface treatment for control of unwanted trees and prevention of sprouts of cut trees. Mix 1 part **Engenia** with 1 to 3 parts water to create the application solution. Use the lower dilution rate when treating difficult-to-control species.

- **Frill or Girdle Treatment** - Using an axe to girdle tree trunk, make a continuous cut or a series of overlapping cuts. Spray or paint the cut surface with the solution.
- **Stump Treatment** - Spray or paint freshly cut surface with the water mix. Thoroughly wet the area adjacent to the bark.

Dormant Multiflora Rose Applications

Engenia can be applied as an undiluted spot treatment directly to the soil or as a Lo-Oil basal bark treatment using an oil-in-water emulsion solution when plants are dormant.

Spot Treatment Applications

Spot treatment application of **Engenia** should be applied directly to the soil as close as possible to the root crown within 6 inches to 8 inches of the crown. On sloping terrain, apply **Engenia** to the uphill side of the crown. **DO NOT** apply when snow or water prevents applying **Engenia** directly to the soil. The use rate of **Engenia** depends on the canopy diameter of the multiflora rose.

Example Engenia use rates:

- 0.25 fl oz per 5-feet canopy diameter
- 1.0 fl oz per 10-feet canopy diameter
- 2.35 fl ozs per 15-feet canopy diameter

Lo-Oil Basal Bark Treatment

For Lo-Oil basal bark treatments, apply **Engenia** to the basal stem region from the ground line to a height of 12 inches to 18 inches. Spray until runoff, with special emphasis on covering the root crown. For best results, apply **Engenia** when plants are dormant.

- **DO NOT** apply after bud break or when plants are showing signs of active growth.
- **DO NOT** apply when snow or water prevents applying **Engenia** to the ground line.

Lo-Oil Spray Solution Preparation

1. Combine 1.5 gallons of water, 1 oz of emulsifier, 12.8 fl ozs of **Engenia**, and 2.5 pints of No. 2 diesel fuel.
2. Adjust the amounts of materials used proportionately to the amount of final spray solution desired.

DO NOT apply more than 8 gallons/A of Lo-Oil spray solution mix per year.

Use with Other Herbicides

Broad-spectrum control of broadleaf and grass weeds requires another herbicide. **Engenia** may be applied sequentially with one or more of, but not limited to, the following herbicide products:

- **Frequency® herbicide**

For approved tank mix options see **www.engeniatankmix.com**.

Pasture, Hay, Rangeland, and Farmstead (noncropland) Restrictions

- **DO NOT** apply more than a maximum cumulative total of 25.6 fl ozs/A of **Engenia** (1 lb dicamba ae/A) during a growing season.
- **DO NOT** apply more than a maximum cumulative total of 12.8 fl ozs/A of **Engenia** (0.5 lb dicamba ae/A) to small grain grown for pasture and to newly seeded areas.

Proso Millet

For use only within Colorado, Nebraska, North Dakota, South Dakota, and Wyoming

Apply **Engenia** and 2,4-D sequentially to provide control or suppression of annual broadleaf weeds; see **Table 1**.

Apply 3.2 fl ozs/A of **Engenia** with 0.375 lb acid equivalent of 2,4-D per acre. Apply as a broadcast or spot treatment to emerged and actively growing weeds and when proso millet is in the 2-leaf to 5-leaf stage. Use directions for 2,4-D products vary with manufacturers; refer to a 2,4-D product with labeling consistent with the crop-stage timing for **Engenia**. Some types of proso millet may be affected adversely by a sequential application of **Engenia** and 2,4-D.

Proso Millet Restrictions

- **DO NOT** apply unless possible proso millet crop injury will be acceptable.
- **DO NOT** apply more than 3.2 fl ozs/A of **Engenia** (0.125 lb dicamba ae/A) per season in proso millet.
- Refer to **Table 5** for grazing restrictions.

Small Grain (barley, oats, triticale, and wheat)

Engenia may be applied before, during, or after planting small grain (barley, oats, triticale, and wheat). Refer to **Application Rates and Timings** for specific small grain

crop uses. For best performance, apply **Engenia® herbicide** when weeds are less than 4 inches in height and rosettes are less than 2-inches across. Applying **Engenia** to small grain during periods of rapid growth may result in crop leaning; this condition is temporary and will not reduce crop yield.

Restrictions for small grain areas grazed or cut for hay are indicated in **Table 5** in **Pasture, Hay, Rangeland, and Farmstead (noncropland)** section of this label.

Application Rates and Timings

Early Season Applications

Table 6. Early Season Application Rate and Growth Stage in Small Grain[1]

Crop	Fall-seeded		Spring-seeded	
	Rate (fl ozs/A)	Growth Stage	Rate (fl ozs/A)	Growth Stage (up to)
Barley[2,3]	1.6 to 3.2	before joint	1.6 to 2.4	4-leaf
Oats[3]			1.6 to 3.2	5-leaf
Triticale			1.6 to 3.2	6-leaf
Wheat[4]			1.6 to 3.2	6-leaf

[1] An adjuvant system should be used with all **Engenia** applications; refer to **Tank Mixing Information** section for details. **DO NOT** use oil concentrates for postemergence in-crop application.
[2] For spring barley varieties seeded during winter months or later, follow the rate and timing given for spring-seeded barley.
[3] **DO NOT** tank mix **Engenia** with 2,4-D in oats or early season application on spring-seeded barley.
[4] Early developing wheat varieties must receive application between early tillering and the joint stage; ensure that the application occurs before the jointing stage.

Fall-seeded Wheat ONLY

Western Oregon. When applied in the spring, **Engenia** may be used at rates up to 4.8 fl ozs/A on fall-seeded wheat. Periods of extended stress such as cold and wet weather may enhance the possibility of crop injury.

Colorado, Kansas, New Mexico, Oklahoma, and Texas. For suppression of perennial weeds (such as field bindweed), up to 6.4 fl ozs/A of **Engenia** may be applied on fall-seeded wheat after wheat exceeds the 3-leaf stage. Application may be made in the fall following a frost but before a killing freeze. **Engenia** at 6.4 fl ozs/A may be sequentially applied with MCPA after wheat begins to tiller. Periods of extended stress such as cold and wet weather may enhance the possibility of crop injury. For fall applications only, **DO NOT** apply **Engenia** if the potential for crop injury is unacceptable.

Preharvest Applications

To control broadleaf weeds that interfere with harvest, **Engenia** may be applied before harvest when barley or wheat is in the hard dough stage and the green color is gone from the nodes (joints) of the stem. Best results will be obtained if the application can be made when weeds are actively growing but before weeds canopy.

Engenia applications may be made to fall-planted and spring-planted barley and wheat at 6.4 fl ozs/A as a broadcast application or spot treatment. A preharvest interval (PHI) of 7 days is required before crop harvest.

Use with Other Herbicides

Broad-spectrum control of broadleaf and grass weeds requires another herbicide. **Engenia** may be applied sequentially with one or more of, but not limited to, the following herbicide products:

- **Beyond® herbicide** (for **Clearfield®** wheat and **Clearfield® Plus** wheat only)
- **Clearmax® herbicide** (for **Clearfield** wheat and **Clearfield Plus** wheat only)
- **Sharpen® powered by Kixor® herbicide**
- **Zidua® herbicide**
- 2,4-D amine
- MCPA
- sulfonylurea-based herbicide (e.g. **Ally® herbicide**, **Express® herbicide**, **Finesse® herbicide**)

For approved tank mix options see **www.engeniatankmix.com**.

Small Grain Restrictions

- **Maximum use rate per application**
  - 3.2 fl ozs/A: Oats and triticale
  - 6.4 fl ozs/A: Spring-seeded barley, fall-seeded barley, wheat
- **Maximum seasonal use rate**
  - 3.2 fl ozs/A: Oats and triticale
  - 8.8 fl ozs/A: Spring-seeded barley
  - 9.6 fl ozs/A: Fall-seeded barley
  - 12.8 fl ozs/A: Wheat
- **DO NOT** apply **Engenia** preharvest to oats or triticale.
- **DO NOT** use oil concentrate for postemergence in-crop application.
- **DO NOT** use preharvest-treated barley or wheat for seed unless a germination test with an acceptable result of 95% germination or more is performed on the seed.
- **DO NOT** graze small grain (barley, oats, triticale, wheat) within 7 days after treatment.
- **DO NOT** harvest for hay within 37 days after treatment.
- Barley and wheat may be harvested 7 days or more after a preharvest application.
- **DO NOT** make preharvest application in California.

Sorghum

Engenia® herbicide may be used early preplant, postemergence, and preharvest in sorghum to control many annual broadleaf weeds and to reduce competition from established perennial broadleaf weeds.

Application Rates and Timings

Preplant Applications

(at least 14 days before planting)

A preplant application of **Engenia** up to 6.4 fl ozs/A may be applied at least 14 days before sorghum planting.

Postemergence Applications

Up to 6.4 fl ozs/A of **Engenia** plus specified adjuvants (refer to **Tank Mixing Information** section for details) may be applied after sorghum is in the spike stage (all sorghum emerged) but before sorghum is 15-inches tall. For best performance, apply **Engenia** when sorghum crop is in the 3-leaf to 5-leaf stage and weeds are small (less than 3-inches tall). Use drop nozzles if sorghum is taller than 8 inches. Keep spray off sorghum leaves and out of the whorl to reduce the likelihood of crop injury and to improve spray coverage of weed foliage.

Applying **Engenia** to sorghum during periods of rapid growth may result in temporary leaning of plants or rolling of leaves. These effects are usually outgrown within 10 to 14 days.

Preharvest Applications

Oklahoma and Texas ONLY

Up to 6.4 fl ozs/A of **Engenia** may be applied for weed suppression any time after sorghum has reached the soft-dough stage. An agriculturally approved surfactant may be used to improve performance; see **Tank Mixing Information** section for details. Delay harvest until 30 days after a preharvest treatment.

Split Applications

Engenia may be applied in split applications: preplant followed by postemergence or preharvest; or postemergence followed by preharvest. **DO NOT** apply more than 6.4 fl ozs/A of **Engenia** per application, or a maximum cumulative total of 12.8 fl ozs/A of **Engenia** per year.

Use with Other Herbicides

Engenia may be applied sequentially with one or more of, but not limited to, the following herbicide products:

- **Basagran® 5L herbicide**
- **Facet® L herbicide**
- **Outlook® herbicide** - (Preplant only)
- **Sharpen® powered by Kixor® herbicide**
- **Verdict® powered by Kixor® herbicide**
- atrazine
- glyphosate (e.g. **Roundup® herbicide**)

For approved tank mix options see **www.engeniatankmix.com**.

Sorghum Restrictions

- **DO NOT** graze or feed treated sorghum forage or silage before mature grain stage. If sorghum is grown for pasture or hay, refer to **Pasture, Hay, Rangeland, and Farmstead (noncropland)** section for specific grazing and feeding restrictions.
- **DO NOT** apply **Engenia** to sorghum grown for seed production.
- **DO NOT** apply more than 6.4 fl ozs/A of **Engenia** (0.25 lb dicamba ae/A) per application.
- **DO NOT** apply more than a maximum cumulative total of 12.8 fl ozs/A of **Engenia** (0.5 lb dicamba ae/A) per season.
- **Oklahoma and Texas only** - Delay harvest until 30 days after a preharvest treatment.

Soybean

Engenia may be used preplant or preharvest in soybean to control many annual broadleaf weeds and to reduce competition from established biennial and perennial broadleaf weeds.

Application Rates and Timings

Preplant Applications

(at least 14 days before planting)

Apply **Engenia** as a broadcast spray at 3.2 to 12.8 fl ozs/A plus specified adjuvants; refer to **Tank Mixing Information** section for details.

Preplant Intervals. Following application of **Engenia** and a minimum accumulation of 1 inch of rainfall or overhead irrigation, preplant waiting intervals are required before planting soybeans or crop injury may occur:

- **14 days** for 3.2 to 6.4 fl ozs/A
- **28 days** for 6.5 to 12.8 fl ozs/A

Preharvest Applications

Apply **Engenia** as a broadcast spray or spot spray at 6.4 to 12.8 fl ozs/A plus specified adjuvants; refer to **Tank Mixing Information** section for details. Applications should be made to emerged and actively growing weeds after soybean pods have reached mature brown color and at least 75% leaf drop has occurred.

Treatments may not kill weeds that later develop from seed or underground parts, such as rhizomes or bulblets, after the effective residual period for **Engenia**. For seedling control, a follow-up program or other cultural practices should be instituted.

Use with Other Herbicides

Engenia® herbicide may be applied sequentially with one or more of, but not limited to, the following herbicide products:

- **Optill® powered by Kixor® herbicide**
- **Outlook® herbicide**
- **Prowl® H2O herbicide**
- **Pursuit® herbicide**
- **Raptor® herbicide**
- **Sharpen® powered by Kixor® herbicide**
- **Verdict® powered by Kixor® herbicide**
- **Zidua® herbicide**
- **Zidua® PRO powered by Kixor® herbicide**
- glyphosate (e.g. **Roundup® herbicide**)

For approved tank mix options see **www.engeniatankmix.com**.

Soybean Restrictions

- **DO NOT** apply more than 12.8 fl ozs/A of **Engenia** (0.5 lb dicamba ae/A) in a spring application before soybean planting.
- **DO NOT** make **Engenia** preplant application to soybeans in geographic areas with average annual rainfall less than 25 inches.
- **DO NOT** apply more than 51.2 fl ozs/A of **Engenia** (2 lbs dicamba ae/A) per year (single growing season).
- **DO NOT** use preharvest-treated soybean for seed unless a germination test with an acceptable result of 95% germination or better is performed on the seed.
- **DO NOT** harvest soybeans until 7 days after a preharvest application.
- **DO NOT** feed soybean fodder or hay following preharvest application of **Engenia**.
- **DO NOT** make preharvest applications in California.

Sugarcane

Engenia may be used any time after weed emergence but before the close-in stage of sugarcane to control many annual and perennial broadleaf weeds; see **Table 1** for weeds controlled or suppressed.

Apply 6.4 to 12.8 fl ozs/A of **Engenia** for control of annual weeds and 12.8 fl ozs/A for control or suppression of biennial and perennial weeds. Use the higher rate of the specified rate range when treating dense vegetative growth. Repeat treatment may be made as needed; however, **DO NOT** apply more than the annual maximum cumulative total of 51.2 fl ozs/A of **Engenia** (2 lbs dicamba ae/A).

When possible, direct the spray beneath the sugarcane canopy to minimize the likelihood of crop injury. Using directed sprays will also help maximize the spray coverage of weed foliage.

Use with Other Herbicides

Engenia may be applied sequentially with one or more of, but not limited to, the following herbicide products:

- **Prowl H2O**
- atrazine

For approved tank mix options see **www.engeniatankmix.com**.

Sugarcane Restrictions

- **DO NOT** apply more than 12.8 fl ozs/A of **Engenia** (1 lb dicamba ae/A) in a single application.
- **DO NOT** apply more than a maximum cumulative total of 51.2 fl ozs/A of **Engenia** (2 lbs dicamba ae/A) per growing season.
- **DO NOT** harvest sugarcane until 87 days after application.

Farmstead Turf (noncropland) and Sod Farms

Engenia may be used in farmstead turf (noncropland) and sod farms to control or suppress growth of many annual, biennial, and some perennial broadleaf weeds; see **Table 1** for weeds controlled or suppressed. **Engenia** will also suppress woody brush and vine species; refer to **Table 2** for application rates based on targeted weed or woody brush and vine species and growth stage. Some weed species will require tank mixes for optimum control.

Repeat treatment may be made as needed; however, **DO NOT** apply more than 25.6 fl ozs/A of **Engenia** (1 lb dicamba ae/A) per growing season.

Apply 30 to 200 gallons of diluted spray per acre (3 to 17 quarts of water per 1000 sq ft), depending on density or height of weeds treated and on type of equipment used.

To avoid injury to newly seeded grasses, delay application of **Engenia** until after the second mowing. Established grass crops growing under stress can exhibit various injury symptoms that may be more pronounced if herbicides are applied. Bentgrass, buffalograss, carpetgrass, and St. Augustinegrass may show a response.

Use with Other Herbicides

Engenia® herbicide at 3.2 to 12.8 fl ozs/A may be applied sequentially with one or more of, but not limited to, the following herbicide products:

- **Drive® XLR8 herbicide**
- **Pendulum® herbicide**
- **Tower® herbicide**
- 2,4-D
- MCPA
- MCPP

For approved tank mix options see **www.engeniatankmix.com**.

Farmstead Turf and Sod Farm Restrictions

- **DO NOT** use on residential sites.
- **DO NOT** apply more than 25.6 fl ozs/A of **Engenia** (1 lb dicamba ae/A) per growing season.
- **Areas where Roots of Sensitive Plants Extend**
  - **DO NOT** apply more than 3.2 fl ozs/A of **Engenia** (0.125 lb dicamba ae/A) on coarse-texture soils (sand, loamy sand, or sandy loam).
  - **DO NOT** apply more than 6.4 fl ozs/A of **Engenia** on fine-texture soils.
  - **DO NOT** make repeat applications in these areas for 30 days and until previous applications of **Engenia** have been activated in the soil by rainfall or irrigation.

Conditions of Sale and Warranty

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF CORPORATION ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND BASF'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF THE PRODUCT.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, EXEMPLARY, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF. 1108

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007969-00345.20171012.**NVA 2017-04-385-0200**
Supersedes: NVA 2012-04-385-0062
NVA 2016-04-385-0297
NVA 2016-04-385-0300

BASF Corporation
26 Davis Drive
Research Triangle Park, NC 27709

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October 12, 2017

Document Processing Desk (AMEND)
Ms. Kathryn Montague
Product Management (23)
Registration Division (H-7505C)
Office of Pesticide Programs
U.S. Environmental Protection Agency
2777 S. Crystal Drive
Arlington, VA 22202

RE: Label Amendment
Engenia herbicide (EPA Reg. No. 7969-345)

Dear Ms. Montague:

BASF is submitting fast-track label amendment for Engenia herbicide (7969-345) making the requested label changes for the upcoming 2018 use season.

There is no PRIA fee required for this fast-track amendment.

Included with the administrative documents are the following:

- EPA Application form 8570-1
- Proposed Engenia herbicide label

Product Relabeling

BASF will make every effort to relabel all existing Engenia herbicide product inventories within the channels of trade and within BASF's possession.

To make this new labeling available as soon as possible and to invalidate any Engenia herbicide DT cotton and soybean supplemental labeling still available in the field BASF will undertake the following product relabeling effort, with the pending approved labeling as soon as container labels can be produced.

- Relabel existing bulk storage units in place with new labeling. Relabeling will be completed at an EPA registered establishment.
- Return existing minibulk containers to an approved EPA Establishment site and relabel with new labeling.
- Return existing 2 x 2.5 gallon cartons and jugs to an approved EPA Establishment site and either relabel or exchange product for new product containing the new labeling.
- All relabeling activities will be reported as required by the EPA Establishment site.

Thank you for your assistance with this matter. If you should have any questions, please feel free to call me at (919) 547-2622.

Regards,

Jeffrey H. Birk, Ph.D.
Regulatory Manager
Phone 919-547-2622
Fax: 919-547-2850

26 Davis Drive, Research Triangle Park, North Carolina 27709-3528 Telephone (919) 547-2830

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UNITED STATE ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

OFFICE OF PESTICIDE PROGRAMS
REGISTRATION DIVISION(7505P

DATE OUT: July 16, 2013

SUBJECT: **STORAGE STABILITY (§ 830.6317) & CORROSION CHARACTERISTICS (830.6320) REVIEW**
ACCELERATED STUDY [ ]; ONE YEAR STUDY [X].
MP [ ] EP [X] EUP [ ] ACTION CODE: R170
DP BARCODE No.: 413095 REG. No. : 7969-GUL
DECISION No.: 463710 MRID No(s): 491596-01
PRODUCT NAME: Engenia Herbicide
COMPANY: BASF CORPORATION

FROM: **William Herald, Microbiologist (MS) / Chemist, REHS / Registered Sanitarian**
Product Chemistry Team
Technical Review Branch/RD (7505P)

W Herald
SRRD 7/19/13

TO: **Michael Walsh / Kathryn Montague, RM 23**
Herbicide Branch / RD (7505P)

I. CONCLUSIONS:

STORAGE STABILITY (830.6317):
[X] ACCEPTABLE
[ ] UNACCEPTABLE*
[ ] UPGRADEABLE*

40CFR158.190 DATA REQUIREMENT: [X] SATISFIED [ ] NOT SATISFIED

CORROSION CHRACTERISTICS (830.6320):
[X] ACCEPTABLE
[ ] UNACCEPTABLE*
[ ] UPGRADEABLE*

40CFR158.190 DATA REQUIREMENT: [X] SATISFIED [ ] NOT SATISFIED

*** If unacceptable or upgradeable describe the deficiency and provide recommendations**

Comments & Recommendations:
It is noted that while Registrants' report recites "The containers were weighed..." the weights of the containers were not provided in the study. In the future Registrant must provide the container weights initially and for each of the testing intervals as provided in OPPTS 830.6317 Storage stability, paragraph (b), (2), (vi) "All test containers should be reweighed at each of the test intervals, prior to and after sampling, to monitor weight."

DP BARCODE No.: 413095 REG. No. : 7969-GUL

DATE: July 16, 2013

I. STUDY SUMMARY

A. STUDY CONDUCTED UNDER US GLP/OECD GUIDELINES

[X] Yes
[ ] No

B. PRODUCT INFORMATION

Active ingredient: BAPMA salt of Dicamba
Label claims Nominal concentration (%): No label found
Initial concentration of the AI (%) used in the study: 48.41%
Lower certified limits (%) based on AI % in the study: 46.958%

C. EXPERIMENTAL PARAMETERS

Temperature: Ambient Warehouse temperatures; and 5 ^{0}C to serve as control.
Duration of study: [X] 1 year; [X] over 1 year
Type of container: Commercial containers made of 4 oz fluorinated HDPE bottles with lapel-foil lined plastic screw caps.
Analysis at intervals: [X] 0 (initial); [X] 3 months; [X] 6 months
[X9 months; [X] 12 months; 18 and 24 month testing intervals.

D. ANALYTICAL METHOD

Method	DETECTOR
High Pressure Liquid chromatography (HPLC)	UV (280nm)

E. RESULTS:

1. Compared to the initial concentrations used in the study, the report shows that the AIs% remained well within the statutory parameters required in Title 40 CFR § 158.350 during the 3rd, 6th, 9th and 12th month testing periods while stored at ambient temperatures and refrigeration at 5°C (±3°C) for 24months.

2. The report recites that at there were no changes in the container. No unusual stability or compatibility problems were observed involving the container and the product. The test substance remained a clear yellow liquid free of separation or sedimentation throughout the study peroid.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

OFFICE OF PESTICIDE PROGRAMS
REGISTRATION DIVISION (7505P)

March 7, 2013

MEMORANDUM:

Subject:	Name of Pesticide Product:	ENGENIA™ HERBICIDE
	EPA Reg. No. /File Symbol:	7969-GUL
	DP Barcode:	DP 402493
	Decision No.:	463710
	Action Code:	R170
	PC Code:	100094 (3,6-Dichloro-2-methoxy benzoic acid, bis (3-aminopropyl) methylamine salt
From:	Byron T. Backus, Ph.D., Toxicologist Technical Review Branch Registration Division (7505P)	Byron T. Backus March-7-2013
To:	Michael Walsh/Kathryn Montague RM 23 Herbicide Branch Registration Division (7505P)	M Hawkins Team Leader/Tox
Registrant:	BASF CORPORATION	

FORMULATION FROM LABEL:

Active Ingredient*:	by wt.
N,N-Bis-(3-aminopropyl)methylamine salt of 3,6-dichloro-o-anisic acid	60.8%
Other Ingredients:	39.2%
TOTAL	100.0%

*Contains 48.38% dicamba (5 pounds acid equivalent per gallon or 600 grams per liter)

ACTION REQUESTED: "PLEASE BUNDLE THIS NEW PRODUCT REVIEW WITH THE APPLICATION FOR 524-ANO (DP 402530)…

ASSOCIATED WITH E-SUBMISSION # 2870. ALL MATERIALS AVAILABLE IN DOCUMENTUM.

TRB Toxicology: Please review all of the attached information for new product registration 7969-GUL…"

BACKGROUND: The material received includes a cover letter (dated April 4, 2012), a proposed label (signal word CAUTION), a CSF (dated 3-23-12), and two data matrices (dated 3-23-12); one of which lists (pages 6-7, 20) by MRID a number of previously submitted acute toxicity studies for dicamba technical herbicide (EPA Reg. No. 7969-132), while the other matrix (3 pages) lists 6 acute toxicity studies (MRIDs 48599303 through 48599308) conducted on the proposed formulation for 7969-GUL, and a proposed label. According to the cover letter of April 4, 2012: "Engenia herbicide is formulated as a new salt of dicamba and the proposed uses are the same as those already approved for Clarity herbicide (7869-137)..."

COMMENTS AND RECOMMENDATIONS:

1. The studies in MRIDs 48599303 through 48599308 have been previously reviewed (TXR 5014153, TRB memorandum dated January 29, 2013) and classified as acceptable. These studies satisfy the acute toxicity data requirements for the registration of 7969-GUL.

2. Based on the previous review (TXR 5014153) of the studies in MRIDs 48599303 through 48599308 the following is the acute toxicity profile for 7969-GUL:

acute oral toxicity	III	Acceptable	MRID 48599303
acute dermal toxicity	IV	Acceptable	MRID 48599304
acute inhalation toxicity	III	Acceptable	MRID 48599305
primary eye irritation	IV	Acceptable	MRID 48599306
primary skin irritation	IV	Acceptable	MRID 48599307
dermal sensitization	Positive	Acceptable	MRID 48599308

3. Based on the acute toxicity profile given above, as well as the proposed label uses and information in the CSF, the following is the precautionary and first aid labeling for 7969-GUL, as obtained from the Label Review System:

PRODUCT ID #: **007969-00345**

PRODUCT NAME: **ENGENIA™**

PRECAUTIONARY STATEMENTS

SIGNAL WORD: **CAUTION**

Hazards to Humans and Domestic Animals:

Harmful if inhaled. Harmful if swallowed. Avoid breathing spray mist. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Wear: Long-sleeved shirt and long pants, Socks, Shoes, and chemical-resistant gloves (such as Natural Rubber, Selection Category A).

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

First Aid:

If inhaled:

-Move the person to fresh air.
-If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
-Call a poison control center or doctor for further treatment advice.

If swallowed:

-Call a poison control center or doctor immediately for treatment advice.
-Have person sip a glass of water if able to swallow.
-Do not induce vomiting unless told to by a poison control center or doctor.
-Do not give anything to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-xxx-xxxx for emergency medical treatment information.

4. The TRB Chemistry Team should review and accept the CSF dated 3-23-12.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION
OFFICE OF PESTICIDE PROGRAMS REGISTRATION DIVISION (7505P)

DP BARCODE No.: D402492, D407960; **FILE SYMBOL No.**: 7969-GUL; **PRODUCT NAME**: Engenia Herbicide; **DECISION No.**:463710; **PC Code(s)**: 100094; **ACTION CODE**: R170; **FOOD Use**: Yes

DATE OUT: January 17, 2013

SUBJECT: End Use Product Chemistry Review
Product Name: Engenia Herbicide

FROM: Shyam Mathur
Product Chemistry Team Leader
Technical Review Branch/RD (7505P)

01-17-13

TO: Michael Walsh / Kathryn Montague, RM 23
Herbicide Branch / RD (7505P)

Company Name: BASF Corporation
Formulation Type: Soluble Liquid

INTRODUCTION:

The registrant has submitted an application for the registration of the new end use product Engenia Herbicide. In support of the registration application, the registrant has submitted 830 series group A and group B product chemistry data with MRID Nos. 485993-01, 485993-02 & 481442-02. The registrant submitted a CSF for basic formulation (dated 03-23-2012) and the product label. TRB has been asked to determine the acceptability of the basic CSF and the supporting product chemistry data.

SUMMARY OF FINDINGS:

1. Name of Active Ingredient(s): N, N - Bis-(3-aminopropyl) methylamine salt of Dicamba (60.80%).

2. Has the registrant claimed substantial similarity to a registered product?

   [ ] Yes; [X] No; [ ] NA; if yes, give the registration number of the cited product.

3. All of the source materials of the active ingredient are derived from registered sources: [X] Yes [ ] No

4. All inert ingredients have been screened by IIAB and found to be approved for the proposed labeled Uses: [X] Yes; [ ] No

5. Confidential Statement of Formula(s):

   [X] Basic - Dated: 03-23-2012; Re-submitted - Dated: NA

   [ ] Alternate CSF – Both Dated: ; Re-submitted – Dated: NA

   Alternate CSF(s) complies with 40CFR§152.43: [ ] Yes; [ ] No; [X] NA

6. Product label

   a. Ingredient statement: Nominal concentration of AI listed on CSF(s) concurs with product label (PR Notice 91-2).
   [X] Yes; [ ] No; if not, explain below:

   Is the sub statement in compliance with PR Notice 97-6 (inert ingredient vs other ingredient)
   [X] Yes; [ ] No; if not, explain below:

Metallic equivalent:	[ ] Yes [X] NA
Soluble arsenic:	[ ] Yes [X] NA
Isomeric ratios:	[ ] Yes [X] NA
Acid Equivalent:	[X] Yes [ ] NA; Dicamba acid equivalent = 48.38%

   b. Health related sub statements: Product contains?

Petroleum distillate at > 10%:	[X] Yes [ ] No [X] NA
Methanol at > 4%:	[ ] Yes [ ] No [X] NA
Sodium nitrate/Sodium Nitrite	[ ] Yes [ ] No [X] NA

   c. Physical chemical hazard statement: Product label requires a statement per 40 CFR §156.78 for flammability, explosive potential or electric insulator breakdown?
   [ ] Yes; [X] No

   Is the sub statement in compliance with PR Notice 98-6 (Total Release Fogger)?
   [ ] Yes; [ ] No; [X] NA; if not, explain below

   d. Label requires an additional Storage and Disposal statement:
   [ ] Yes; [X] No; if yes explain below:

7. Group **A**: Product Chemistry Data

TRB's determination of the acceptability for the proposed product is listed in the tables below.

Guideline No.	Study Title		Data submitted		TRB's Assessment of Data	MRID Nos.
			Yes	No		
830.1550	Product Identity & Composition		X		A	485993-01
830.1600	Description of materials used to produce the product		X		A	485993-01
830.1650	Description of formulation process		X		A	485993-01
830.1670	Discussion on the formation of impurities		X		A	485993-01
830.1700	Preliminary analysis				NA	
830.1750	Certified limits (158.350)	Standard certified limits	X		A	The registrant has proposed non-standard certified limits for two of the ingredients used in the formulation and has provided suitable justifications. CSF (9-23-12)
		Proposed Limits	X		A	
		Justification for wider limits	X		A	
830.1800	Enforcement analytical method		X		A	485993-01

A = Acceptance, N = Not Acceptable, G = Data Gap, W = Waiver Request, I = In Progress, NA = Not Applicable; U = Upgradeable.

8. Group **B:**

Guideline No.	Study Title	Value or Qualitative Description	TRB's Assessment of Data	MRID Nos.
830.6302-6303	Physical State	Liquid at 20°C	A	485993-02
830.6315	Flammability	NA		485993-02
830.6316	Explodability	NA		485993-02
830.7000	pH	6.86 at 25°C (1% solution in water)	A	485993-02
830.7300	Density	1.244 g/cc @ 21.8°C	A	485993-02

A = Acceptance, N = Not Acceptable, G = Data Gap, W = Waiver request, NA = Not applicable, I = In progress; U = Upgradeable.

830.7370: Dissociation constant (MRID No. 481442-02)

The dissociation kinetics of aqueous solutions DETA and BAPMA salts of dicamba were determined by UV spectrophotometric method. Under the study test conditions, each of these salts reached an equilibrium state of dissociation within 80 seconds, establishing a value of 2.3×10^{-2} sec^{-1} as the lower limit for the dissociation rate constant for each of the salts.

This finding is in the same range as the dissociation kinetics of the potassium, dimethylamine, isopropylamine diglycolamine and sodium salts of dicamba reported in 1994 (BASF Reg. Doc. No. 1994/5238).

CONCLUSIONS:

The TRB has reviewed the product chemistry data submitted for the proposed end-use product and has concluded that:

1. The proposed CSF for basic formulation (dated 03-23-2012) is acceptable.

2. The data submitted corresponding to guidelines 830.1550 (product identity & composition), 830.1600 (description of materials used to produce the product), 830.1650 (description of formulation process), 830.1670 (description of formation of impurities), 830.1750 (certified limits), and 830.1800 (enforcement analytical limits) are acceptable.

3. The product chemistry data submitted corresponding to guidelines 830.6302 (color), 830.6303 (physical state), 830.6304 (odor), 830.6314 (oxidation/reduction), 830.6315(flammability), 830.6316 (explodability), 830.7000 (pH), 830.7100 (viscosity), 830.7300 (density) and 830.7370 (dissociation constant) are acceptable.

4. The registrant stated that one year studies corresponding to guidelines 830.6317 (storage stability) and 830.6320 (corrosion characteristics) are in progress. The results of these studies must be submitted to the Agency for evaluation.

5. The proposed label was screened as it pertains to the product chemistry requirements. The final review of the proposed label and uses are the purview of the RM team.

BASF

The Chemical Company

September 15, 2016

Document Processing Desk
Ms. Kathryn Montague
Product Management (23)
Registration Division (H-7505C)
Office of Pesticide Programs
U.S. Environmental Protection Agency
2777 S. Crystal Drive
Arlington, VA 22202

RE: Field Flux Data for Engenia Herbicide
Engenia herbicide (EPA Reg. No. 7969-GUL)

Dear Ms. Montague:

BASF is submitting a second field flux study for Engenia herbicide (7969-GUL) to document the potential for gaseous loss after application. This data supports the low volatility nature of Engenia herbicide, and further demonstrates that under typical field conditions the gaseous dicamba loss potential for Engenia herbicide is significantly less than the nontarget plant NOEC. It is BASF's expectation that this data will be reviewed by EFED to determine if non-wind directional spray buffers would be required to protect sensitive plants after application.

There is no PRIA fee required for this ongoing action.

Under the current electronic guidelines, BASF Corporation is submitting all administrative documents and scientific reports for this submission exclusively in electronic (XML) format in lieu of paper copies. MRID numbers are already assigned for scientific reports.

Included with the administrative documents are the following:

- EPA Application form 8570-1
- Certificate with Respect to Citation of Data form 8570-34 for Engenia herbicide and Dicamba Technical herbicide
- Engenia herbicide internal and public data matrix

Thank you for your assistance with this matter. If you should have any questions, please feel free to call me at (919) 547-2622.

Regards,

Jeffrey H. Birk, Ph.D.
Regulatory Manager
Phone 919-547-2622
Fax: 919-547-2850
Email: jeffrey.birk@basf.com

Vol. No.	OPPTS No.	Study References	MRID No.
1	n/a	Administrative Documents in a folder	No Data
2	835.8100	Jackson S. **Sampling for possible gaseous field loss after application of a commercial herbicide (Summer application).** Study ID#(s) 819375; 16F0119 September 14, 2016 BASF Reg. Doc. # 2016/7009355. 371 pages.	**50020301**

Bean 27

BASF

The Chemical Company

June 21, 2016

Document Processing Desk
Ms. Kathryn Montague
Product Management (23)
Registration Division (H-7505C)
Office of Pesticide Programs
U.S. Environmental Protection Agency
2777 S. Crystal Drive
Arlington, VA 22202

RE: Wind Tunnel (DRT) Round 4, Data submission in support of Pending Registration Petition Engenia herbicide (EPA Reg. No. 7969-GUL)

Dear Ms. Montague:

BASF is submitting Round 4 wind tunnel evaluations for the effect of tank mixtures on the spray droplet spectrum with Engenia herbicide (7969-GUL). This data is part of the Drift Reduction Technology testing protocol. It is BASF's expectation that this data will be reviewed by EFED to determine the appropriate spray buffer requirements based on the resulting spray droplet spectrum for each specific Engenia tank mixture and sprayer nozzle combination.

There is no PRIA fee required for this ongoing action.

Under the current electronic guidelines, BASF Corporation is submitting all administrative documents and scientific reports for this submission exclusively in electronic (XML) format in lieu of paper copies. MRID numbers are already assigned for scientific reports.

Included with the administrative documents are the following:

- EPA Application form 8570-1
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- Engenia herbicide internal and public data matrix

Thank you for your assistance with this matter. If you should have any questions, please feel free to call me at (919) 547-2622.

Regards,

Jeffrey H. Birk, Ph.D.
Regulatory Manager
Phone 919-547-2622
Fax: 919-547-2850
Email: jeffrey.birk@basf.com

Sent to EFED

BASF
We create chemistry

Vol. No.	OPPTS No.	Study References	MRID No.
1	n/a	Administrative Documents in a folder	No Data
2	840.Suppl	Jackson S.H. **2016 Wind tunnel particle size analysis of various nozzles and tank mix partners for BAS183 ..H - (round IV).** Study ID(s): n/a June 20, 2016. BASF Reg. Doc. # 2016/7006248. 30 pages.	**49952901**

BASF

The Chemical Company

June 21, 2016

Document Processing Desk
Ms. Kathryn Montague
Product Management (23)
Registration Division (H-7505C)
Office of Pesticide Programs
U.S. Environmental Protection Agency
2777 S. Crystal Drive
Arlington, VA 22202

RE: Wind Tunnel (DRT) Round 4, Data submission in support of Pending Registration Petition Engenia herbicide (EPA Reg. No. 7969-GUL)

Dear Ms. Montague:

BASF is submitting Round 4 wind tunnel evaluations for the effect of tank mixtures on the spray droplet spectrum with Engenia herbicide (7969-GUL). This data is part of the Drift Reduction Technology testing protocol. It is BASF's expectation that this data will be reviewed by EFED to determine the appropriate spray buffer requirements based on the resulting spray droplet spectrum for each specific Engenia tank mixture and sprayer nozzle combination.

There is no PRIA fee required for this ongoing action.

Under the current electronic guidelines, BASF Corporation is submitting all administrative documents and scientific reports for this submission exclusively in electronic (XML) format in lieu of paper copies. MRID numbers are already assigned for scientific reports.

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- Certificate with Respect to Citation of Data form 8570-34 for Engenia herbicide and Dicamba Technical herbicide
- Engenia herbicide internal and public data matrix

Thank you for your assistance with this matter. If you should have any questions, please feel free to call me at (919) 547-2622.

Regards,

Jeffrey H. Birk, Ph.D.
Regulatory Manager
Phone 919-547-2622
Fax: 919-547-2850
Email: jeffrey.birk@basf.com

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We create chemistry

Vol. No.	OPPTS No.	Study References	MRID No.
1	n/a	Administrative Documents in a folder	No Data
2	840.Suppl	Jackson S.H. **2016 Wind tunnel particle size analysis of various nozzles and tank mix partners for BAS183 ..H - (round IV).** Study ID(s): n/a June 20, 2016. BASF Reg. Doc. # 2016/7006248. 30 pages.	**49952901**

BASF

The Chemical Company

August 24, 2015

Document Processing Desk (**APPL**)
Ms. Kathryn Montague
Product Management (23)
Registration Division (H-7505C)
Office of Pesticide Programs
U.S. Environmental Protection Agency
2777 S. Crystal Drive
Arlington, VA 22202

RE: Revised basic and alternate CSFs in support of Pending Registration Petition Engenia herbicide (EPA Reg. No. 7969-GUL)

Dear Ms. Montague:

BASF is submitting revised basic and alternate CSFs in support of the pending registration action for Engenia herbicide (7969-GUL). Revisions include the addition of three additional U.S. production locations and the option to use Dicamba 98 Technical herbicide (7969-362) as the dicamba acid source. No other changes have been made to the proposed CSFs.

There is no PRIA fee required for this ongoing action.

Included with the administrative documents are the following:

- EPA Application form 8570-1
- Proposed Engenia herbicide basic and alternate 1 CSFs.

Thank you for your assistance with this matter. If you should have any questions, please feel free to call me at (919) 547-2622.

Regards,

Jeffrey H. Birk, Ph.D.
Regulatory Manager
Phone 919-547-2622
Fax: 919-547-2850
Email: jeffrey.birk@basf.com

e-Submission
e-Submission

Please read instructions on reverse before co[illegible]ing form. Form Approv OMB No. 2070-0060. Approval expires 2-28-95

United States
Environmental Protection Agency
Washington, DC 20460

- [x] Registration
- [ ] Amendment
- [ ] Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
7969-GUL	Kathryn Montague	[ ] None [ ] Restricted
4. Company/Product (Name)	**PM#**	
Engenia herbicide	23	

5. Name and Address of Applicant *(Include ZIP Code)*

BASF
26 Davis Drive
Research Triangle Park, NC 27709

[ ] *Check if this is a new address*

6. Expedited Reveiw. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:

EPA Reg. No. _____

Product Name _____

Section - II

- [ ] Amendment - Explain below.
- [ ] Resubmission in response to Agency letter dated _____
- [ ] Notification - Explain below.
- [ ] Final printed labels in repsonse to Agency letter dated _____
- [ ] "Me Too" Application.
- [x] Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Submission of update basic and alternate CSFs in support of the proposed Engenia herbicide, registration action, 7969-GUL.
This submission is not subject to a PRIA fee
Contact Jeff Birk at 919-547-2622 (phone), 919-547-2850 (fax) or by Email at jeffrey.birk@basf.com

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
[ ] Yes [ ] No	[ ] Yes [ ] No	[ ] Yes [ ] No	[ ] Metal [ ] Plastic [ ] Glass [ ] Paper [ ] Other (Specify) _____
***Certification must be submitted**	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
[ ] Label [ ] Container		[ ]

6. Manner in Which Label is Affixed to Product [ ] Lithograph [ ] Paper glued [ ] Stenciled [ ] Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
Jeffrey H. Birk	Regulatory Manager	919-547-2622

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowlingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received (Stamped)

2. Signature	3. Title	4. Typed Name	5. Date
[signature]	Regulatory Manager e-Submission	Jeffrey H. Birk	August 24, 2015

EPA Form 8570-1 (Rev. 3-94) Previous editions are obsolete. White - EPA File Copy (original) Yellow - Applicant Copy

BASF

The Chemical Company

July 22, 2015

Document Processing Desk
Ms. Kathryn Montague
Product Management (23)
Registration Division (H-7505C)
Office of Pesticide Programs
U.S. Environmental Protection Agency
2777 S. Crystal Drive
Arlington, VA 22202

RE: EFED data for N,N-Bis-(3-aminopropyl) methylamine (BAPMA)
Engenia herbicide (EPA Reg. No. 7969-GUL)

Dear Ms. Montague:

BASF is submitting EFED data for N,N-Bis-(3-aminopropyl) methylamine (BAPMA) in support of the pending registration action for Engenia herbicide (7969-GUL). In an email for Grant Rowland, dated July 14, 2015, HED requested all available data on the persistence and degradability of BAPMA counter ion as well as on its practicality for measurement in the environment.

As a low volume industrial us chemical, BASF has essentially no environmental fate data for BAPMA. Some undocumented information is provided on the BAPMA product safety data sheet (included with this submission) and this same information has been use to populated the REACH database for BAPMA in the EU. To provide some information on the possible Efate characteristics of BAPMA, BASF has performed a QSAR analysis for both BAPMA and the commercially available dicamba counter ion, diglycolamine (DGA).

BASF has no knowledge or experience concerning the practicality for measuring BAPMA in the environment.

There is no PRIA fee required for this ongoing action.

Under the current electronic guidelines, BASF Corporation is submitting all administrative documents and scientific reports for this submission exclusively in electronic (XML) format in lieu of paper copies. MRID numbers are already assigned for scientific reports.

Included with the administrative documents are the following:

- EPA Application form 8570-1
- Certificate with Respect to Citation of Data form 8570-34 for Engenia herbicide
- Email from Grant Rowland, dated July 14, 2015
- Safety Data Sheet (SDS) for BAPMA
- Engenia herbicide internal and public data matrix

Thank you for your assistance with this matter. If you should have any questions, please feel free to call me at (919) 547-2622.

Regards,

Jeffrey H. Birk, Ph.D.
Regulatory Manager
Phone 919-547-2622
Fax: 919-547-2850
Email: jeffrey.birk@basf.com

e-Submission

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Vol. No.	OPPTS No.	Study References	MRID No.
1	n/a	Administrative Documents in a folder	No Data
2	830.Suppl	Jackson S. **Comparison of physical/chemical properties for BAPMA and DGA Salts using the estimations programs interface for Windows (EPI Suite) QSAR tool.** Study ID(s): n/a July 21, 2015. BASF Reg. Doc. # 2015/7001693. 44 pages.	**49676101**

e-Submission

BASF Corporation
Agricultural Products Division
26 Davis Drive
Research Triangle Park N.C.
27709

Helping Make Products Better™

Form Approved OMB Nos. 2070-0060; 2070-0057; 2070-0107; 2070-0122; 2070-0164

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
1200 Pennsylvania Avenue, N.W.
WASHINGTON, D.C. 20460

Certification with Respect to Citation of Data

Applicant's/Registrant's Name, Address, and Telephone Number BASF, 26 Davis Drive, Research Triangle Park, NC 27709; 919-547-2000	EPA Registration Number/File Symbol 7969-GUL
Active Ingredient(s) and/or representative test compound(s) Dicamba (3,6-dichloro-o-anisic acid)	Date July 22, 2015
General Use Pattern(s) (list all those claimed for this product using 40 CFR Part 158) Terrestrial Food Crop	Product Name Engenia herbicide

NOTE: If your product is a 100% repackaging of another purchased EPA-registered product labeled for all the same uses on your label, you do not need to submit this form. You must submit the Formulator's Exemption Statement (EPA Form 8570-27).

☐ I am responding to a Data-Call-In Notice, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).

SECTION I: METHOD OF DATA SUPPORT (Check one method only)

☐ I am using the cite-all method of support, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).

☑ I am using the selective method of support (or cite-all option under the selective method), and have included with this form a completed list of data requirements (the Data Matrix form must be used).

SECTION II: GENERAL OFFER TO PAY

[Required if using the cite-all method or when using the cite-all option under the selective method to satisfy one or more data requirements]

☑ I hereby offer and agree to pay compensation, to other persons, with regard to the approval of this application, to the extent required by FIFRA.

SECTION III: CERTIFICATION

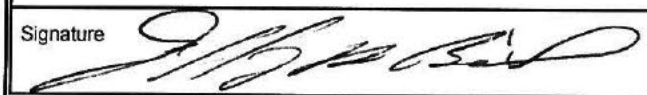
I certify that this application for registration, this form for reregistration, or this Data-Call-In response is supported by all data submitted or cited in the application for registration, the form for reregistration, or the Data-Call-In response. In addition, if the cite-all option or cite-all option under the selective method is indicated in Section I, this application is supported by all data in the Agency's files that (1) concern the properties or effects of this product or an identical or substantially similar product, or one or more of the ingredients in this product; and (2) is a type of data that would be required to be submitted under the data requirements in effect on the date of approval of this application if the application sought the initial registration of a product of identical or similar composition and uses .

I certify that for each exclusive use study cited in support of this registration or reregistration, that I am the original data submitter or that I have obtained the written permission of the original data submitter to cite that study.

I certify that for each study cited in support of this registration or reregistration that is not an exclusive use study, either: (a) I am the original data submitter; (b) I have obtained the permission of the original data submitter to use the study in support of this application; (c) all periods of eligibility for compensation have expired for the study; (d) the study is in the public literature; or (e) I have notified in writing the company that submitted the study and have offered (I) to pay compensation to the extent required by sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA; and (ii) to commence negotiations to determine the amount and terms of compensation, if any, to be paid for the use of the study.

I certify that in all instances where an offer of compensation is required, copies of all offers to pay compensation and evidence of their delivery in accordance with sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA are available and will be submitted to the Agency upon request. Should I fail to produce such evidence to the Agency upon request, I understand that the Agency may initiate action to deny, cancel or suspend the registration of my product in conformity with FIFRA.

I certify that the statements I have made on this form and all attachments to it are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

Signature	Date	Typed or Printed Name and Title
	July 22, 2015	Jeffrey H. Birk/Product Registration Manager

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per response for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not send the form to this address.

DATA MATRIX

Date 7-22-15	EPA Reg No./File Symbol 7969-GUL	Page 1 of 4
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, P.O. Box 13528, Research Triangle Park, NC 27709-3528	**Product:** **Engenia herbicide**	
Ingredient N,N-Bis-(3-aminopropyl) methylamine Salt of 3,6-dichloro-o-anisic acid CAS Registry Number 1286239-22-2		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
810.1000	Summary data for amine salts of Dicamba:Doc ID 2010/7009194	48144201	BASF Corporation	Own	
Supplemental	Dissociation rates of salts of Dicamba: Doc ID 2010/7008548	48144202	BASF Corporation	Own	
	Product Identity and Composition				
830.1550 (61-1)	Product identity and composition: Doc ID 2011/7002586	48599301	BASF Corporation	Own	
830.1600 (61-2)	Description of materials used to produce	48599301	BASF Corporation	Own	
	the product: Doc ID 2011/7002586				
830.1620 (61-2)	Description of the production process				N.R.[1]
830.1650	Description of formulation process: Doc ID 2011/7002586	48599301	BASF Corporation	Own	
830.1670 (61-3)	Discussion of formation of impurities: Doc ID 2011/7002586	48599301	BASF Corporation	Own	
	Analysis and Certified Limits				
830.1700 (62-1)	Preliminary Analysis				N.R.[1]
830.1750 (62-2)	Certified limits: Doc ID 2011/7002586	48599301	BASF Corporation	Own	
830.1800 (62-3)	Enforcement analytical method: Doc ID 2011/7002586	48599301	BASF Corporation	Own	
	Physical and Chemical Characteristics				
830.6302 (63-2)	Color: Doc ID 2011/7004945	48599302	BASF Corporation	Own	

Signature	Name and Title: Jeffrey H. Birk Regulatory Manager	Date 7-22-15

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

DATA MATRIX

Date 7-22-15	EPA Reg No./File Symbol 7969-GUL	Page 2 of 4
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, P.O. Box 13528, Research Triangle Park, NC 27709-3528	**Product:** **Engenia herbicide**	
Ingredient N,N-Bis-(3-aminopropyl) methylamine Salt of 3,6-dichloro-o-anisic acid CAS Registry Number 1286239-22-2		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
830.6303 (63-3)	Physical state: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.6304 (63-4)	Odor: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.6313 (63-13)	Stability to normal and elevated temperatures,				N.R.[2]
	metals, and metal ions				
830.7300 (63-7)	Density, bulk density or specific gravity: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.7000 (63-12)	pH: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.6314 (63-14)	Oxidizing or reducing action: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.6315 (63-15)	Flammability				N.R.[5]
830.6316 (63-16)	Explodability				N.R.[5]
830.6317 (63-17)	Storage stability	49159601	BASF Corporation	Own	N.R.[6]
830.7100 (63-18)	Viscosity: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.6319 (63-19)	Miscibility				N.R.[3]
830.6320 (63-20)	Corrosion characteristics		BASF Corporation	Own	N.R.[6]
830.6321 (63-21)	Dielectric breakdown voltages				N.R.[4]
830 Series	Phys/Chem Properties Summary: Doc ID 2011/7004973	48599302	BASF Corporation	Own	

Signature	Name and Title: Jeffrey H. Birk Regulatory Manager	Date 7-22-15

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per response for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not send the form to this address.

DATA MATRIX

Date 7-22-15	EPA Reg No./File Symbol 7969-GUL	Page 3 of 4
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, P.O. Box 13528, Research Triangle Park, NC 27709-3528	**Product:** **Engenia herbicide**	
Ingredient N,N-Bis-(3-aminopropyl) methylamine Salt of 3,6-dichloro-o-anisic acid CAS Registry Number 1286239-22-2		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
835.2120 (161-1)	Hydrolysis: Doc ID 2000/5000164	48144203	BASF Corporation	Own	
840.1100 supplemental	Spray droplet size spectrum	49671601	BASF Corporation	Own	
		49671602	BASF Corporation	Own	
830 Series Supplemental	Physical and Chemical Characteristics: Doc ID 2015/7001693	PENDING	BASF Corporation	Own	
	Acute Testing				
870.1100 (81-1)	Acute oral toxicity: Doc ID 2010/1105428	48599303	BASF Corporation	Own	
870.1200 (81-2)	Acute dermal toxicity: Doc ID 2010/1105429	48599304	BASF Corporation	Own	
870.1300 (81-3)	Acute inhalation toxicity: Doc ID 2011/1042494	48599305	BASF Corporation	Own	
870.2400 (81-4)	Primary eye irritation: Doc ID 2010/1105430	48599306	BASF Corporation	Own	
870.2500 (81-5)	Primary dermal irritation: Doc ID 2010/1105431	48599307	BASF Corporation	Own	
870.2600 (81-6)	Dermal sensitization: Doc ID 2010/1166272	48599308	BASF Corporation	Own	
870.3100	90-day oral toxicity, rat: Doc ID 2014/1105759	49441801	BASF Corporation	Own	
870.3700	Prenatal developmental toxicity, rat: Doc ID 2014/1144433	49441802	BASF Corporation	Own	
870.3465	28 day inhalation	49441803	BASF Corporation	Own	

Signature	Name and Title: Jeffrey H. Birk Regulatory Manager	Date 7-22-15

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

DATA MATRIX

Date 7-22-15	**EPA Reg No./File Symbol** 7969-GUL	**Page** 4 **of** 4
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, P.O. Box 13528, Research Triangle Park, NC 27709-3528	**Product:** **Engenia herbicide**	
Ingredient N,N-Bis-(3-aminopropyl) methylamine Salt of 3,6-dichloro-o-anisic acid CAS Registry Number 1286239-22-2		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
870.supplemental	Dicamba amines- hazard potential assessment: Doc ID 2011/7002365	48599309	BASF Corporation	Own	

Footnotes:
(1) Data not submitted because end-use product is not produced by an intergrated formulation system.
(2) Not required for an end-use product.
(3) Not required because product is not an emulsifiable liquid and is not to be diluted with petroleum solvents
(4) N/A since product is not recommended for use around electrical equipment
(5) Aqueous solution
(6) In progress

Signature	Name and Title: Jeffrey H. Birk Regulatory Manager	Date 7-22-15

Please read instructions on reverse before completing form. Form Approved. OMB No. 2070-0060. Approval expires 2-28-95

EPA

United States
Environmental Protection Agency
Washington, DC 20460

- [x] **Registration**
- [ ] **Amendment**
- [ ] **Other**

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
7969-GUL	Kathryn Montague	[ ] None [ ] Restricted
4. Company/Product (Name)	**PM#**	
Engenia herbicide	23	

5. Name and Address of Applicant *(Include ZIP Code)*

BASF
26 Davis Drive
Research Triangle Park, NC 27709

[ ] *Check if this is a new address*

6. Expedited Reveiw. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:

EPA Reg. No. _____

Product Name _____

Section - II

- [ ] Amendment - Explain below.
- [ ] Resubmission in response to Agency letter dated _____
- [ ] Notification - Explain below.
- [ ] Final printed labels in repsonse to Agency letter dated _____
- [ ] "Me Too" Application.
- [x] Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Submission of additional data in support of the proposed Engenia herbicide, registration action, 7969-GUL.
This submission is not subject to a PRIA fee
Contact Jeff Birk at 919-547-2622 (phone), 919-547-2850 (fax) or by Email at jeffrey.birk@basf.com

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
[ ] Yes [ ] No	[ ] Yes [ ] No	[ ] Yes [ ] No	[ ] Metal [ ] Plastic [ ] Glass [ ] Paper [ ] Other (Specify)
***Certification must be submitted**	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
[ ] Label [ ] Container		[ ]

6. Manner in Which Label is Affixed to Product [ ] Lithograph [ ] Paper glued [ ] Stenciled [ ] Other _____

Section - IV

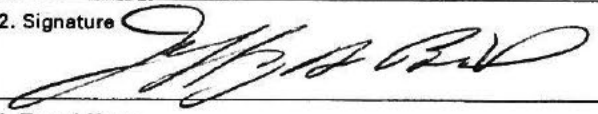
1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
Jeffrey H. Birk	Regulatory Manager	919-547-2622

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowlingllly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received (Stamped)

2. Signature	3. Title	
	Regulatory Manager	
4. Typed Name	**5. Date**	
Jeffrey H. Birk	July 22, 2015	e-Submission

EPA Form 8570-1 (Rev. 3-94) Previous editions are obsolete. White - EPA File Copy (original) Yellow - Applicant Copy

BASF

The Chemical Company

July 15, 2015

Document Processing Desk
Ms. Kathryn Montague
Product Management (23)
Registration Division (H-7505C)
Office of Pesticide Programs
U.S. Environmental Protection Agency
2777 S. Crystal Drive
Arlington, VA 22202

RE: Wind Tunnel (DRT) Data submission in support of Pending Registration Petition Engenia herbicide (EPA Reg. No. 7969-GUL)

Dear Ms. Montague:

BASF is submitting data from wind tunnel evaluations for the effect of tank mixtures on the spray droplet spectrum with Engenia herbicide (7969-GUL). This data is part of the Drift Reduction Technology testing protocol. It is BASF's expectation that this data will be reviewed by EFED to determine the appropriate spray buffer requirements based on the resulting spray droplet spectrum for each specific Engenia tank mixture and sprayer nozzle combination.

There is no PRIA fee required for this ongoing action.

Under the current electronic guidelines, BASF Corporation is submitting all administrative documents and scientific reports for this submission exclusively in electronic (XML) format in lieu of paper copies. MRID numbers are already assigned for scientific reports.

Included with the administrative documents are the following:

- EPA Application form 8570-1
- Certificate with Respect to Citation of Data form 8570-34 for Engenia herbicide and Dicamba Technical herbicide
- Engenia herbicide internal and public data matrix

Thank you for your assistance with this matter. If you should have any questions, please feel free to call me at (919) 547-2622.

Regards,

Jeffrey H. Birk, Ph.D.
Regulatory Manager
Phone 919-547-2622
Fax: 919-547-2850
Email: jeffrey.birk@basf.com

e-Submission

BASF
We create chemistry

Vol. No.	OPPTS No.	Study References	MRID No.
1	n/a	Administrative Documents in a folder	No Data
2	840.Suppl	Jackson S.H. **Wind tunnel particle size analysis of various nozzles and tank mix partners for BAS183 ..H (Round I).** Study ID(s): n/a May 21, 2015. BASF Reg. Doc. # 2015/7000616. 61 pages.	**49671601**
3	840.Suppl	Jackson S.H. **Wind tunnel particle size analysis of various nozzles and tank mix partners for BAS183 ..H - (Round II).** Study ID(s): n/a May 26, 2015. BASF Reg. Doc. # 2015/7001196. 98 pages.	**49671602**

e-Submission

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Form Approved OMB No. 2070-0060

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DATA MATRIX

Date 7-15-15	**EPA Reg No./File Symbol** 7969-GUL	**Page** 1 of 4
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, P.O. Box 13528, Research Triangle Park, NC 27709-3528	**Product:** **Engenia herbicide**	
Ingredient N,N-Bis-(3-aminopropyl) methylamine Salt of 3,6-dichloro-o-anisic acid CAS Registry Number 1286239-22-2		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
810.1000	Summary data for amine salts of Dicamba:Doc ID 2010/7009194	48144201	BASF Corporation	Own	
Supplemental	Dissociation rates of salts of Dicamba: Doc ID 2010/7008548	48144202	BASF Corporation	Own	
	Product Identity and Composition				
830.1550 (61-1)	Product identity and composition: Doc ID 2011/7002586	48599301	BASF Corporation	Own	
830.1600 (61-2)	Description of materials used to produce	48599301	BASF Corporation	Own	
	the product: Doc ID 2011/7002586				
830.1620 (61-2)	Description of the production process				N.R.[1]
830.1650	Description of formulation process: Doc ID 2011/7002586	48599301	BASF Corporation	Own	
830.1670 (61-3)	Discussion of formation of impurities: Doc ID 2011/7002586	48599301	BASF Corporation	Own	
	Analysis and Certified Limits				
830.1700 (62-1)	Preliminary Analysis				N.R.[1]
830.1750 (62-2)	Certified limits: Doc ID 2011/7002586	48599301	BASF Corporation	Own	
830.1800 (62-3)	Enforcement analytical method: Doc ID 2011/7002586	48599301	BASF Corporation	Own	
	Physical and Chemical Characteristics				
830.6302 (63-2)	Color: Doc ID 2011/7004945	48599302	BASF Corporation	Own	

Signature	**Name and Title:** Jeffrey H. Birk Regulatory Manager	**Date** 7-15-15

EPA Form 8570-35 (9-97) Electronic and Paper versions available. Submit only Paper version.

Agency Internal use Copy

e-Submission

Form Approved OMB No. 2070-0060

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DATA MATRIX

Date 7-15-15	EPA Reg No./File Symbol 7969-GUL	Page 2 of 4
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, P.O. Box 13528, Research Triangle Park, NC 27709-3528	**Product:** **Engenia herbicide**	
Ingredient N,N-Bis-(3-aminopropyl) methylamine Salt of 3,6-dichloro-o-anisic acid CAS Registry Number 1286239-22-2		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
830.6303 (63-3)	Physical state: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.6304 (63-4)	Odor: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.6313 (63-13)	Stability to normal and elevated temperatures,				N.R.[2]
	metals, and metal ions				
830.7300 (63-7)	Density, bulk density or specific gravity: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.7000 (63-12)	pH: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.6314 (63-14)	Oxidizing or reducing action: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.6315 (63-15)	Flammability				N.R.[5]
830.6316 (63-16)	Explodability				N.R.[5]
830.6317 (63-17)	Storage stability	49159601	BASF Corporation	Own	N.R.[6]
830.7100 (63-18)	Viscosity: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.6319 (63-19)	Miscibility				N.R.[3]
830.6320 (63-20)	Corrosion characteristics		BASF Corporation	Own	N.R.[6]
830.6321 (63-21)	Dielectric breakdown voltages				N.R.[4]
830 Series	Phys/Chem Properties Summary: Doc ID 2011/7004973	48599302	BASF Corporation	Own	

Signature	Name and Title: Jeffrey H. Birk Regulatory Manager	Date 7-15-15

Form Approved OMB No. 2070-0060

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401 M Street, S.W.
WASHINGTON, D.C. 20460

DATA MATRIX

Date 7-15-15	**EPA Reg No./File Symbol** 7969-GUL	
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, P.O. Box 13528, Research Triangle Park, NC 27709-3528	**Product:** **Engenia herbicide**	
Ingredient N,N-Bis-(3-aminopropyl) methylamine Salt of 3,6-dichloro-o-anisic acid CAS Registry Number 1286239-22-2		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
835.2120 (161-1)	Hydrolysis: Doc ID 2000/5000164	48144203	BASF Corporation	Own	
840.1100 supplemental	Spray droplet size spectrum	49671601	BASF Corporation	Own	
		49671602	BASF Corporation	Own	
	Acute Testing				
870.1100 (81-1)	Acute oral toxicity: Doc ID 2010/1105428	48599303	BASF Corporation	Own	
870.1200 (81-2)	Acute dermal toxicity: Doc ID 2010/1105429	48599304	BASF Corporation	Own	
870.1300 (81-3)	Acute inhalation toxicity: Doc ID 2011/1042494	48599305	BASF Corporation	Own	
870.2400 (81-4)	Primary eye irritation: Doc ID 2010/1105430	48599306	BASF Corporation	Own	
870.2500 (81-5)	Primary dermal irritation: Doc ID 2010/1105431	48599307	BASF Corporation	Own	
870.2600 (81-6)	Dermal sensitization: Doc ID 2010/1166272	48599308	BASF Corporation	Own	
870.3100	90-day oral toxicity, rat: Doc ID 2014/1105759	49441801	BASF Corporation	Own	
870.3700	Prenatal developmental toxicity, rat: Doc ID 2014/1144433	49441802	BASF Corporation	Own	
870.3465	28 day inhalation	49441803	BASF Corporation	Own	
870.supplemental	Dicamba amines- hazard potential assessment: Doc ID 2011/7102365	48599309	BASF Corporation	Own	

Signature	**Name and Title:** Jeffrey H. Birk Regulatory Manager	**Date** 7-15-15

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

DATA MATRIX

Date 7-15-15	**EPA Reg No./File Symbol** 7969-GUL	**Page** 4 **of** 4
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, P.O. Box 13528, Research Triangle Park, NC 27709-3528	**Product:** **Engenia herbicide**	
Ingredient N,N-Bis-(3-aminopropyl) methylamine Salt of 3,6-dichloro-o-anisic acid CAS Registry Number 1286239-22-2		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note

Footnotes:
(1) Data not submitted because end-use product is not produced by an intergrated formulation system.
(2) Not required for an end-use product.
(3) Not required because product is not an emulsifiable liquid and is not to be diluted with petroleum solvents
(4) N/A since product is not recommended for use around electrical equipment
(5) Aqueous solution
(6) In progress

Signature	Name and Title: Jeffrey H. Birk Regulatory Manager	Date 7-15-15

Form Approved OMB Nos. 2070-0060; 2070-0057; 2070-0107; 2070-0122; 2070-0164

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
1200 Pennsylvania Avenue, N.W.
WASHINGTON, D.C. 20460

Certification with Respect to Citation of Data

Applicant's/Registrant's Name, Address, and Telephone Number BASF, 26 Davis Drive, Research Triangle Park, NC 27709; 919-547-2000	EPA Registration Number/File Symbol 7969-GUL
Active Ingredient(s) and/or representative test compound(s) Dicamba (3,6-dichloro-o-anisic acid)	Date July 15, 2015
General Use Pattern(s) (list all those claimed for this product using 40 CFR Part 158) Terrestrial Food Crop	Product Name Engenia herbicide

NOTE: If your product is a 100% repackaging of another purchased EPA-registered product labeled for all the same uses on your label, you do not need to submit this form. You must submit the Formulator's Exemption Statement (EPA Form 8570-27).

☐ I am responding to a Data-Call-In Notice, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).

SECTION I: METHOD OF DATA SUPPORT (Check one method only)

☐ I am using the cite-all method of support, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).

☑ I am using the selective method of support (or cite-all option under the selective method), and have included with this form a completed list of data requirements (the Data Matrix form must be used).

SECTION II: GENERAL OFFER TO PAY

[Required if using the cite-all method or when using the cite-all option under the selective method to satisfy one or more data requirements]

☑ I hereby offer and agree to pay compensation, to other persons, with regard to the approval of this application, to the extent required by FIFRA.

SECTION III: CERTIFICATION

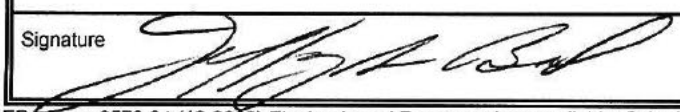
I certify that this application for registration, this form for reregistration, or this Data-Call-In response is supported by all data submitted or cited in the application for registration, the form for reregistration, or the Data-Call-In response. In addition, if the cite-all option or cite-all option under the selective method is indicated in Section I, this application is supported by all data in the Agency's files that (1) concern the properties or effects of this product or an identical or substantially similar product, or one or more of the ingredients in this product; and (2) is a type of data that would be required to be submitted under the data requirements in effect on the date of approval of this application if the application sought the initial registration of a product of identical or similar composition and uses .

I certify that for each exclusive use study cited in support of this registration or reregistration, that I am the original data submitter or that I have obtained the written permission of the original data submitter to cite that study.

I certify that for each study cited in support of this registration or reregistration that is not an exclusive use study, either: (a) I am the original data submitter; (b) I have obtained the permission of the original data submitter to use the study in support of this application; (c) all periods of eligibility for compensation have expired for the study; (d) the study is in the public literature; or (e) I have notified in writing the company that submitted the study and have offered (i) to pay compensation to the extent required by sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA; and (ii) to commence negotiations to determine the amount and terms of compensation, if any, to be paid for the use of the study.

I certify that in all instances where an offer of compensation is required, copies of all offers to pay compensation and evidence of their delivery in accordance with sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA are available and will be submitted to the Agency upon request. Should I fail to produce such evidence to the Agency upon request, I understand that the Agency may initiate action to deny, cancel or suspend the registration of my product in conformity with FIFRA.

I certify that the statements I have made on this form and all attachments to it are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

Signature	Date	Typed or Printed Name and Title
	July 15, 2015	Jeffrey H. Birk/Product Registration Manager

Form Approved OMB Nos. 2070-0060; 2070-0057; 2070-0107; 2070-0122; 2070-0164

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
1200 Pennsylvania Avenue, N.W.
WASHINGTON, D.C. 20460

Certification with Respect to Citation of Data

Applicant's/Registrant's Name, Address, and Telephone Number BASF, 26 Davis Drive, Research Triangle Park, NC 27709; 919-547-2000	EPA Registration Number/File Symbol 7969-132
Active Ingredient(s) and/or representative test compound(s) Dicamba (3,6-dichloro-o-anisic acid)	Date July 15, 2015
General Use Pattern(s) (list all those claimed for this product using 40 CFR Part 158) Technical for: Terrestrial Food Crop, Terrestrial Non-Food Crop	Product Name Dicamba Technical

NOTE: If your product is a 100% repackaging of another purchased EPA-registered product labeled for all the same uses on your label, you do not need to submit this form. You must submit the Formulator's Exemption Statement (EPA Form 8570-27).

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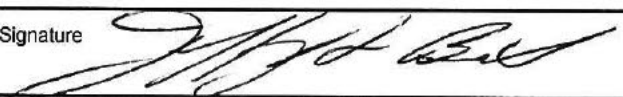
I certify that for each exclusive use study cited in support of this registration or reregistration, that I am the original data submitter or that I have obtained the written permission of the original data submitter to cite that study.

I certify that for each study cited in support of this registration or reregistration that is not an exclusive use study, either: (a) I am the original data submitter; (b) I have obtained the permission of the original data submitter to use the study in support of this application; (c) all periods of eligibility for compensation have expired for the study; (d) the study is in the public literature; or (e) I have notified in writing the company that submitted the study and have offered (I) to pay compensation to the extent required by sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA; and (ii) to commence negotiations to determine the amount and terms of compensation, if any, to be paid for the use of the study.

I certify that in all instances where an offer of compensation is required, copies of all offers to pay compensation and evidence of their delivery in accordance with sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA are available and will be submitted to the Agency upon request. Should I fail to produce such evidence to the Agency upon request, I understand that the Agency may initiate action to deny, cancel or suspend the registration of my product in conformity with FIFRA.

I certify that the statements I have made on this form and all attachments to it are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

Signature	Date	Typed or Printed Name and Title
	July 15, 2015	Jeffrey H. Birk/Product Registration Manager

e-Submission

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

DATA MATRIX

Date 8-18-14	**EPA Reg No./File Symbol** 7969-GUL	**Page** 1 **of** 4
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, P.O. Box 13528, Research Triangle Park, NC 27709-3528	**Product:** **Engenia herbicide**	
Ingredient N,N-Bis-(3-aminopropyl) methylamine Salt of 3,6-dichloro-o-anisic acid CAS Registry Number 1286239-22-2		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
[redacted]			BASF Corporation	Own	
			BASF Corporation	Own	
			BASF Corporation	Own	
			BASF Corporation	Own	
					N.R.[1]
			BASF Corporation	Own	
			BASF Corporation	Own	
					N.R.[1]
			BASF Corporation	Own	
			BASF Corporation	Own	
			BASF Corporation	Own	

e-SUBMISSION

Signature	**Name and Title:** Jeffrey H. Birk Regulatory Manager	**Date** 8-18-14

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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WASHINGTON, D.C. 20460

DATA MATRIX

Date 8-18-14	EPA Reg No./File Symbol 7969-GUL	Page 2 of 4
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Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
[redacted]			BASF Corporation	Own	
			BASF Corporation	Own	
					N.R.[2]
			BASF Corporation	Own	
			BASF Corporation	Own	
			BASF Corporation	Own	
					N.R.[5]
					N.R.[5]
			BASF Corporation	Own	N.R.[6]
			BASF Corporation	Own	
					N.R.[3]
			BASF Corporation	Own	N.R.[6]
					N.R.[4]
			BASF Corporation	Own	

Signature	Name and Title: Jeffrey H. Birk Regulatory Manager	Date 8-18-14

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

DATA MATRIX

Date 8-18-14	EPA Reg No./File Symbol 7969-GUL	Page 3 of 4
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, P.O. Box 13528, Research Triangle Park, NC 27709-3528	**Product:** **Engenia herbicide**	
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			BASF Corporation	Own	
			BASF Corporation	Own	
			BASF Corporation	Own	
			BASF Corporation	Own	
			BASF Corporation	Own	
			BASF Corporation	Own	

Signature	Name and Title: Jeffrey H. Birk Regulatory Manager	Date 8-18-14

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

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DATA MATRIX

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Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, P.O. Box 13528, Research Triangle Park, NC 27709-3528		**Product:** **Engenia herbicide**	
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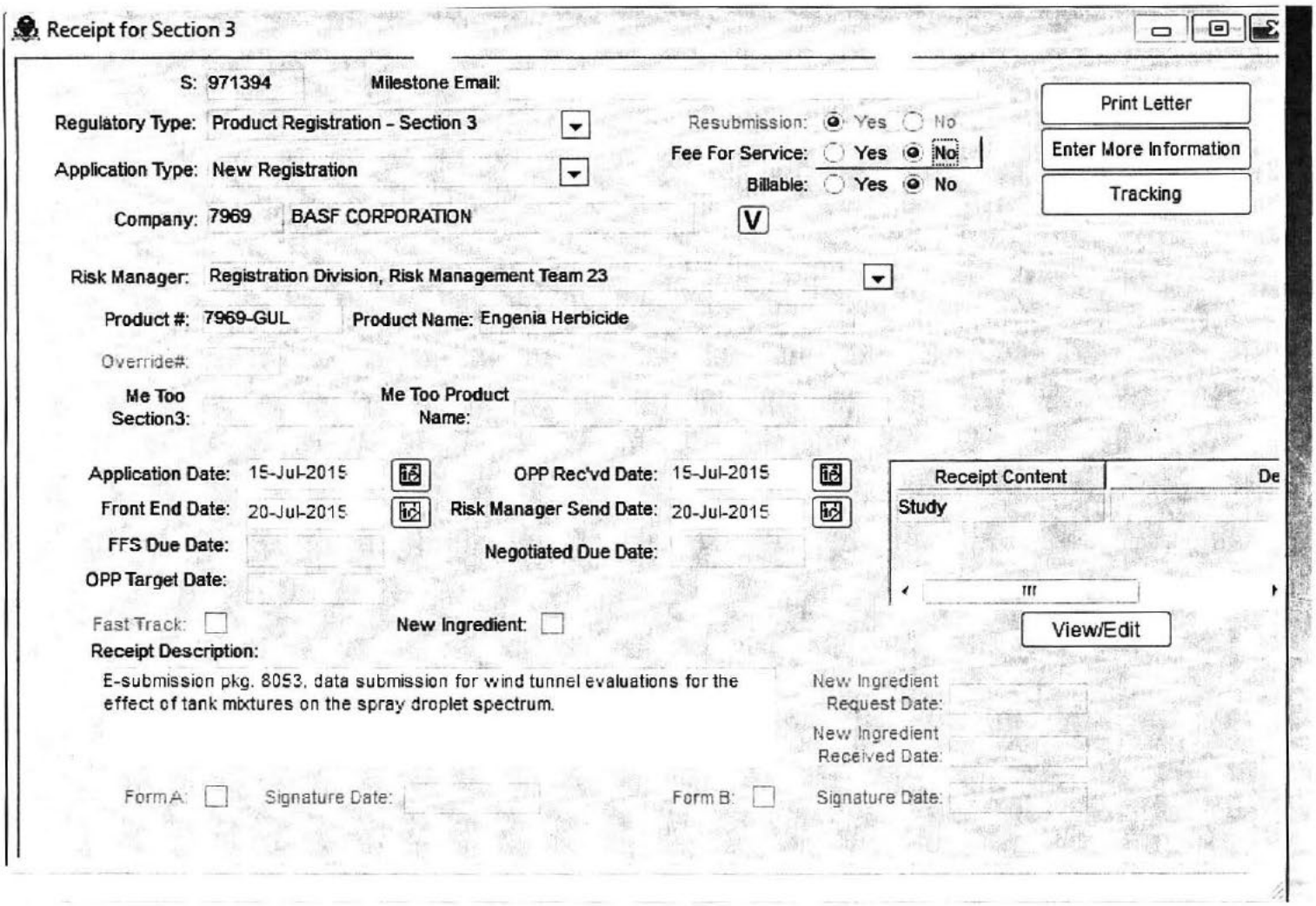
(2) Not required for an end-use product.
(3) Not required because product is not an emulsifiable liquid and is not to be diluted with petroleum solvents
(4) N/A since product is not recommended for use around electrical equipment
(5) Aqueous solution
(6) In progress

Signature	Name and Title: Jeffrey H. Birk Regulatory Manager	Date 8-18-14


Receipt for Section 3
S: 971394
Milestone Email:
Regulatory Type: Product Registration - Section 3
Application Type: New Registration
Company: 7969 BASF CORPORATION
Resubmission: Yes No
Fee For Service: Yes No
Billable: Yes No
Print Letter
Enter More Information
Tracking
Risk Manager: Registration Division, Risk Management Team 23
Product #: 7969-GUL
Product Name: Engenia Herbicide
Override#:
Me Too Section3:
Me Too Product Name:
Application Date: 15-Jul-2015
OPP Rec'vd Date: 15-Jul-2015
Front End Date: 20-Jul-2015
Risk Manager Send Date: 20-Jul-2015
FFS Due Date:
Negotiated Due Date:
OPP Target Date:
Receipt Content
Study
View/Edit
Fast Track:
New Ingredient:
Receipt Description:
E-submission pkg. 8053, data submission for wind tunnel evaluations for the effect of tank mixtures on the spray droplet spectrum.
New Ingredient Request Date:
New Ingredient Received Date:
Form A:
Signature Date:
Form B:
Signature Date:

Please read instructions on reverse before con... ting form. Form Approv... OMB No. 2070-0060. Approval expires 2-28-95

EPA

United States
Environmental Protection Agency
Washington, DC 20460

- [x] **Registration**
- [ ] **Amendment**
- [ ] **Other**

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
7969-GUL	Kathryn Montague	☐ None ☐ Restricted
4. Company/Product (Name)	**PM#**	
Engenia herbicide	23	

5. Name and Address of Applicant *(Include ZIP Code)*

BASF
26 Davis Drive
Research Triangle Park, NC 27709

☐ *Check if this is a new address*

6. Expedited Reveiw. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:

EPA Reg. No. _____

Product Name _____

Section - II

- ☐ Amendment - Explain below.
- ☐ Resubmission in response to Agency letter dated _____
- ☐ Notification - Explain below.
- ☐ Final printed labels in repsonse to Agency letter dated _____
- ☐ "Me Too" Application.
- ☑ Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Submission of additional data in support of the proposed Engenia herbicide, registration action, 7969-GUL.
This submission is not subject to a PRIA fee
Contact Jeff Birk at 919-547-2622 (phone), 919-547-2850 (fax) or by Email at jeffrey.birk@basf.com

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Metal ☐ Plastic ☐ Glass ☐ Paper ☐ Other (Specify) _____
Certification must be submitted	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
☐ Label ☐ Container		☐

6. Manner in Which Label is Affixed to Product ☐ Lithograph ☐ Paper glued ☐ Stenciled ☐ Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
Jeffrey H. Birk	Regulatory Manager	919-547-2622

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowlingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6 Date Application Received (Stamped)

2. Signature	3. Title	4. Typed Name	5. Date
	Regulatory Manager	Jeffrey H. Birk	July 15, 2015 e-Submission

EPA Form 8570-1 (Rev. 3-94) Previous editions are obsolete. White - EPA File Copy (original) Yellow - Applicant Copy

BASF

The Chemical Company

August 14, 2014

Document Processing Desk
Ms. Kathryn Montague
Product Management (23)
Registration Division (H-7505C)
Office of Pesticide Programs
U.S. Environmental Protection Agency
2777 S. Crystal Drive
Arlington, VA 22202

Re: Data Access Limited Authorization Letter
Monsanto Dicamba Technical

Dear Ms. Montague:

Reference is hereby made to data supporting the registration of **Dicamba herbicide Technical** (EPA Reg. No. 7969-132) owned by BASF (EPA Company Number 7969) or an affiliate thereof (hereinafter "**BASF**"), in whole or in part, and submitted to the EPA by or on behalf of BASF.

Monsanto Company (EPA Company Number 524) ("**Monsanto**") desires to submit a registration application ("**Monsanto Registration Application**") to the US Environmental Protection Agency ("**EPA**") for dicamba herbicide technical. Monsanto has approached BASF for a letter of authorization to cite to data supporting the registration of Dicamba herbicide Technical (the "**BASF Dicamba Data**") and, pursuant to a written agreement between BASF and Monsanto, BASF has agreed to grant to Monsanto the following limited right to cite to the relevant BASF Dicamba Data in support of the Monsanto Registration Application.

For the period commencing on the date first set forth above by BASF in accordance with the terms of the agreement between BASF and Monsanto, this data access limited authorization letter ("**Letter**") authorizes EPA personnel to reference, upon the request of Monsanto, the BASF Dicamba Data for the sole and limited purpose of supporting the Monsanto Registration Application ("**Purpose**").
This Letter allows EPA personnel to utilize the BASF Dicamba Data for the Purpose only. The BASF Dicamba Data shall not be made part of Monsanto's or any of its affiliates' product registration files, or disclosed to Monsanto, any of its affiliates, or any other registrant without BASF's prior written consent. The right granted hereunder may not be assigned or transferred to any person or entity without the prior written consent of BASF. This Letter does not imply any waiver, abdication, conveyance, or transfer of any interest, right, or title in or to the BASF Dicamba Data. Accordingly, BASF retains and reserves all existing data ownership and compensation rights in and to all BASF Dicamba Data.

If you have any questions concerning this authorization please contact me at (919) 547-2622, or by e mail at jeffrey.birk@basf.com.

Thank you for your assistance.

Jeffrey H. Birk, Ph.D.
Regulatory Manager
Phone 919-547-2622
Fax: 919-547-2850
Email: jeffrey.birk@basf.com

26 Davis Drive, Research Triangle Park, North Carolina 27709-3528 Telephone (919) 547-2830

Please read instructions on reverse before completing form. Form Approved. OMB No. 2070-0060. Approval expires 2-28-95

EPA

United States
Environmental Protection Agency
Washington, DC 20460

☐ Registration
☐ Amendment
☑ Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
7969-132	Kathryn Montague	☐ None ☐ Restricted
4. Company/Product (Name)	**PM#**	
Dicamba Technical herbicide	23	

5. Name and Address of Applicant *(Include ZIP Code)*

BASF Corporation
P.O. Box 13528
Research Triangle Park, NC 27709

☐ *Check if this is a new address*

6. Expedited Reveiw. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:

EPA Reg. No. _____

Product Name _____

Section - II

☐ Amendment - Explain below.
☐ Resubmission in response to Agency letter dated _____
☐ Notification - Explain below.
☐ Final printed labels in repsonse to Agency letter dated _____
☐ "Me Too" Application.
☑ Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

BASF is submitting a data access limited authorization letter for Dicamba Technical herbicide (7969-132)
Contact Jeff Birk at 919-547-2622 (phone), 919-547-2850 (fax) or by Email at jeffrey.birk@basf.com

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Metal ☐ Plastic ☐ Glass ☐ Paper ☐ Other (Specify) _____
* *Certification must be submitted*	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
☐ Label ☐ Container		☐

6. Manner in Which Label is Affixed to Product ☐ Lithograph ☐ Paper glued ☐ Stenciled ☐ Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
Jeffrey H. Birk	Product Registration Manager	919-547-2622

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowlingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received (Stamped)

2. Signature	3. Title
	Product Registration Manager
4. Typed Name	**5. Date**
Jeffrey H. Birk	August 14, 2014

EPA Form 8570-1 (Rev. 3-94) Previous editions are obsolete. White - EPA File Copy (original) Yellow - Applicant Copy

BASF

The Chemical Company

May 27, 2014

Document Processing Desk (**APPL**)
Ms. Kathryn Montague
Product Management (23)
Registration Division (H-7505C)
Office of Pesticide Programs
U.S. Environmental Protection Agency
2777 S. Crystal Drive
Arlington, VA 22202

RE: Data submission in support of Pending Registration Petition
Engenia herbicide (EPA Reg. No. 7969-GUL)

Dear Ms. Montague:

BASF is submitting crop residue data, revised Group A report, revised CSF and revised labeling in support of the pending registration action for Engenia herbicide (7969-GUL).

- The crop residue data is necessary to demonstrate that the expected crop residue for dicamba in conventional crops resulting from the proposed Engenia herbicide uses is supported by existing crop residue tolerances.
- The Group A report is revised to include the use of wet molten dicamba in addition to dry flake dicamba technical in the formulation process for Engenia herbicide.
- The proposed CSF's for Engenia herbicide are revised to correct the methylamine nomenclature and to include additional sources for N,N-Bis-(3-aminopropyl) methylamine (BAPMA).
- The proposed labeling for Engenia has been revised to reflect the current proposed application requirements (i.e. nozzles) and to add the use in dicamba-glufosinate tolerant cotton.

There is no PRIA fee required for this ongoing action.

Under the current electronic guidelines, BASF Corporation is submitting all administrative documents and scientific reports for this submission exclusively in electronic (XML) format in lieu of paper copies. MRID numbers are already assigned for scientific reports.

Included with the administrative documents are the following:

- EPA Application form 8570-1
- Certificate with Respect to Citation of Data form 8570-34 for Dicamba Technical
- Certificate with Respect to Citation of Data form 8570-34 for Engenia herbicide
- Dicamba Technical internal and public data matrix
- Engenia herbicide internal and public data matrix
- Copy of Letter of Access from Monsanto for the addition of dicamba-glufosinate tolerant cotton use to the Engenia labeling.

Thank you for your assistance with this matter. If you should have any questions, please feel free to call me at (919) 547-2622.

Regards,

Jeffrey H. Birk, Ph.D.
Regulatory Manager
Phone 919-547-2622
Fax: 919-547-2850
Email: jeffrey.birk@basf.com

BASF
The Chemical Company

Vol. No.	OPPTS No.	Study References	MRID No.
1	n/a	Administrative Documents	No Data
2	860.1340	Perez R., Perez S. **Independent method validation of BASF analytical method D0902: The determination of residues of Dicamba (BAS 183H) and its metabolites, 5-Hydroxy Dicamba in corn matrices in LC/MS/MS.** TRB Chem Study ID(s): 357999, ADPEN-2K9-903-0320 July 06, 2009. BASF Reg. Doc. # 2009/7000154. 81 pages.	**49379301**
3	860.1500	Norris F.A. **Magnitude of the residue of Dicamba in pasture grasses, formulation bridging study.** HED Stud ID(s): 389562, AA100711 November 28, 2012. BASF Reg. Doc. # 2012/7004246. 382 pages.	**49379302**
	860.1500	Shepard E. **Formulation bridging study - Magnitude of the residue of Dicamba in wheat after application of BAS 183 H, BAS 183 UYH, or BAS 183 WBH (Clarity herbicide and two new salt formulations).** HED Study ID(s): BASF 389563 (ABC 65748) August 23, 2013. BASF Reg. Doc. # 2012/7005467. 323 pages.	**49379303**
	860.1500	Shepard E. **Formulation bridging study - Magnitude of the residue of Dicamba in corn after application of BAS 183 09H, BAS UYH or BAS 183 WBH (Clarity Herbicide and two new salt formulations).** HED Study ID(s): BASF 389564 (ABC 65749) March 05, 2013. BASF Reg. Doc. # 2012/7005468. 176 pages.	**49379304**
	860.1500	Norris F.A. **Magnitude of the residue of Dicamba in soybean matrices, formulation bridging study.** HED Study ID(s): 389561, AA100712 April 15, 2013. BASF Reg. Doc. # 2012/7005501. 328 pages.	**49379305**
	830.1550 830.1600 830.1620 830.1650 830.1670 830.1750 830.1800	Sochaski M.A. **BAS 183 22 H Group A - Product identity, composition, and analysis.** TRB-Chem Study ID#(s): n/a March 19, 2014. BASF Reg. Doc. # 2014/7000545. 4 pages plus a *Confidential Attachment* of 49 pages.	**49379306**

BASF

The Chemical Company

June 27, 2013

Document Processing Desk (**APPL**)
Ms. Kathryn Montague
Product Management (23)
Registration Division (H-7505C)
Office of Pesticide Programs
U.S. Environmental Protection Agency
2777 S. Crystal Drive
Arlington, VA 22202

RE: Data submission in support of Pending Registration Petition
Engenia herbicide (EPA Reg. No. 7969-GUL)

Dear Ms. Montague:

BASF is submitting the storage stability and corrosion characteristics (OPPTS 830.6317 and 830.6320) in support of the pending registration action for Engenia herbicide (7969-GUL). These data requirements were indicated as "on going" in the original registration submission for this action. Included in the submission are the following reports:

There is no PRIA fee required for this ongoing action.

Under the current electronic guidelines, BASF Corporation is submitting all administrative documents and scientific reports for this submission exclusively in electronic (XML) format in lieu of paper copies. MRID numbers are already assigned for scientific reports.

Included with the administrative documents are the following:

- EPA Application form 8570-1
- Certificate with Respect to Citation of Data form 8570-34
- Engenia herbicide internal and public data matrix

Thank you for your assistance with this matter. If you should have any questions, please feel free to call me at (919) 547-2622.

Regards,

Jeffrey H. Birk, Ph.D.
Regulatory Manager
Phone 919-547-2622
Fax: 919-547-2850
Email: jeffrey.birk@basf.com

E-SUBMISSION

BASF
The Chemical Company

Vol. No.	OPPTS No.	Study References	MRID No.
1	n/a	Administrative Documents in a folder	No Data
2	830.6317 830.6320	Yacoub R. **BAS 183 WB H: Storage stability and corrosion characteristics in commerical type containers.** Study ID#(s) 378850_20 February 21, 2013. BASF Reg. Doc. # 2013/7000195. 12 pages.	**49159601**

E-SUBMISSION

BASF Corporation
Agricultural Products Division
26 Davis Drive
Research Triangle Park N.C. 27709

Helping Make Products Better™

Form Approved OMB Nos. 2070-0060; 2070-0057; 2070-0107; 2070-0122; 2070-0164

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
1200 Pennsylvania Avenue, N.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 1.25 hours per response for registration and 0.25 hours per response for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, Collection Strategies Division (2822T), U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, N.W., Washington, DC 20460. Do not send the completed form to this address.

Certification with Respect to Citation of Data

Applicant's/Registrant's Name, Address, and Telephone Number BASF, 26 Davis Drive, Research Triangle Park, NC 27709; 919-547-2000	EPA Registration Number/File Symbol 7969-GUL
Active Ingredient(s) and/or representative test compound(s) Dicamba (3,6-dichloro-o-anisic acid)	Date June 27, 2013
General Use Pattern(s) (list all those claimed for this product using 40 CFR Part 158) Technical for: Terrestrial Food Crop, Terrestrial Non-Food Crop	Product Name Engenia herbicide

NOTE: If your product is a 100% repackaging of another purchased EPA-registered product labeled for all the same uses on your label, you do not need to submit this form. You must submit the Formulator's Exemption Statement (EPA Form 8570-27).

☐ I am responding to a Data-Call-In Notice, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).

SECTION I: METHOD OF DATA SUPPORT (Check one method only)

☐ I am using the cite-all method of support, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).	☑ I am using the selective method of support (or cite-all option under the selective method), and have included with this form a completed list of data requirements (the Data Matrix form must be used).

SECTION II: GENERAL OFFER TO PAY

[Required if using the cite-all method or when using the cite-all option under the selective method to satisfy one or more data requirements]

☑ I hereby offer and agree to pay compensation, to other persons, with regard to the approval of this application, to the extent required by FIFRA.

SECTION III: CERTIFICATION

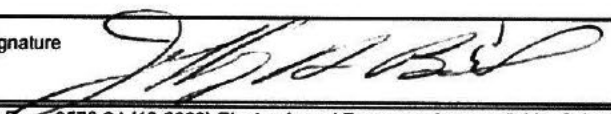
I certify that this application for registration, this form for reregistration, or this Data-Call-In response is supported by all data submitted or cited in the application for registration, the form for reregistration, or the Data-Call-In response. In addition, if the cite-all option or cite-all option under the selective method is indicated in Section I, this application is supported by all data in the Agency's files that (1) concern the properties or effects of this product or an identical or substantially similar product, or one or more of the ingredients in this product; and (2) is a type of data that would be required to be submitted under the data requirements in effect on the date of approval of this application if the application sought the initial registration of a product of identical or similar composition and uses .

I certify that for each exclusive use study cited in support of this registration or reregistration, that I am the original data submitter or that I have obtained the written permission of the original data submitter to cite that study.

I certify that for each study cited in support of this registration or reregistration that is not an exclusive use study, either: (a) I am the original data submitter; (b) I have obtained the permission of the original data submitter to use the study in support of this application; (c) all periods of eligibility for compensation have expired for the study; (d) the study is in the public literature; or (e) I have notified in writing the company that submitted the study and have offered (i) to pay compensation to the extent required by sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA; and (ii) to commence negotiations to determine the amount and terms of compensation, if any, to be paid for the use of the study.

I certify that in all instances where an offer of compensation is required, copies of all offers to pay compensation and evidence of their delivery in accordance with sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA are available and will be submitted to the Agency upon request. Should I fail to produce such evidence to the Agency upon request, I understand that the Agency may initiate action to deny, cancel or suspend the registration of my product in conformity with FIFRA.

I certify that the statements I have made on this form and all attachments to it are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

Signature	Date	Typed or Printed Name and Title
	6-27-13	Jeffrey H. Birk/Product Registration Manager

EPA Form 8570-34 (12-2003) Electronic and Paper versions available. Submit only Paper version.

E-SUBMISSION

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

DATA MATRIX

Date 6-27-13	**EPA Reg No./File Symbol** 7969-GUL	**Page** 1 of 3
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, P.O. Box 13528, Research Triangle Park, NC 27709-3528	**Product:** **Engenia herbicide**	
Ingredient N,N-Bis-(3-aminopropyl) methylamine Salt of 3,6-dichloro-o-anisic acid CAS Registry Number 1286239-22-2		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
810.1000	Summary data for amine salts of Dicamba:Doc ID 2010/7009194	48144201	BASF Corporation	Own	
Supplemental	Dissociation rates of salts of Dicamba: Doc ID 2010/7008548	48144202	BASF Corporation	Own	
	Product Identity and Composition				
830.1550 (61-1)	Product identity and composition: Doc ID 2011/7002586	48599301	BASF Corporation	Own	
830.1600 (61-2)	Description of materials used to produce	48599301	BASF Corporation	Own	
	the product: Doc ID 2011/7002586				
830.1620 (61-2)	Description of the production process				N.R.[1]
830.1650	Description of formulation process: Doc ID 2011/7002586	48599301	BASF Corporation	Own	
830.1670 (61-3)	Discussion of formation of impurities: Doc ID 2011/7002586	48599301	BASF Corporation	Own	
	Analysis and Certified Limits				
830.1700 (62-1)	Preliminary Analysis				N.R.[1]
830.1750 (62-2)	Certified limits: Doc ID 2011/7002586	48599301	BASF Corporation	Own	
830.1800 (62-3)	Enforcement analytical method: Doc ID 2011/7002586	48599301	BASF Corporation	Own	
	Physical and Chemical Characteristics				
830.6302 (63-2)	Color: Doc ID 2011/7004945	48599302	BASF Corporation	Own	

Signature	**Name and Title:** Jeffrey H. Birk Regulatory Manager	**Date** 6-27-13

EPA Form 8570-35 (8-97) Electronic and Paper versions available. Submit only Paper version. Agency Internal use Copy

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per response for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not send the form to this address.

DATA MATRIX

Date 6-27-13	EPA Reg No./File Symbol 7969-GUL	Page 2 of 3
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, P.O. Box 13528, Research Triangle Park, NC 27709-3528	**Product:** **Engenia herbicide**	
Ingredient N,N-Bis-(3-aminopropyl) methylamine Salt of 3,6-dichloro-o-anisic acid CAS Registry Number 1286239-22-2		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
830.6303 (63-3)	Physical state: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.6304 (63-4)	Odor: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.6313 (63-13)	Stability to normal and elevated temperatures,				N.R.[2]
	metals, and metal ions				
830.7300 (63-7)	Density, bulk density or specific gravity: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.7000 (63-12)	pH: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.6314 (63-14)	Oxidizing or reducing action: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.6315 (63-15)	Flammability				N.R.[5]
830.6316 (63-16)	Explodability				N.R.[5]
830.6317 (63-17)	Storage stability	49159601	BASF Corporation	Own	N.R.[6]
830.7100 (63-18)	Viscosity: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.6319 (63-19)	Miscibility				N.R.[3]
830.6320 (63-20)	Corrosion characteristics		BASF Corporation	Own	N.R.[6]
830.6321 (63-21)	Dielectric breakdown voltages				N.R.[4]
830 Series	Phys/Chem Properties Summary: Doc ID 2011/7004973	48599302	BASF Corporation	Own	

Signature	Name and Title: Jeffrey H. Birk Regulatory Manager	Date 6-27-13

EPA Form 8570-35 (9-97) Electronic and Paper versions available. Submit only Paper version.

Agency Internal use Copy

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

DATA MATRIX

Date 6-27-13	EPA Reg No./File Symbol 7969-GUL	Page 3 of 3
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, P.O. Box 13528, Research Triangle Park, NC 27709-3528	**Product:** **Engenia herbicide**	
Ingredient N,N-Bis-(3-aminopropyl) methylamine Salt of 3,6-dichloro-o-anisic acid CAS Registry Number 1286239-22-2		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
835.2120 (161-1)	Hydrolysis: Doc ID 2000/5000164	48144203	BASF Corporation	Own	
	Acute Testing				
870.1100 (81-1)	Acute oral toxicity: Doc ID 2010/1105428	48599303	BASF Corporation	Own	
870.1200 (81-2)	Acute dermal toxicity: Doc ID 2010/1105429	48599304	BASF Corporation	Own	
870.1300 (81-3)	Acute inhalation toxicity: Doc ID 2011/1042494	48599305	BASF Corporation	Own	
870.2400 (81-4)	Primary eye irritation: Doc ID 2010/1105430	48599306	BASF Corporation	Own	
870.2500 (81-5)	Primary dermal irritation: Doc ID 2010/1105431	48599307	BASF Corporation	Own	
870.2600 (81-6)	Dermal sensitization: Doc ID 2010/1166272	48599308	BASF Corporation	Own	
870.supplemental	Dicamba amines- hazard potential assessment: Doc ID 2011/7002365	48599309	BASF Corporation	Own	

Footnotes:
(1) Data not submitted because end-use product is not produced by an intergrated formulation system.
(2) Not required for an end-use product.
(3) Not required because product is not an emulsifiable liquid and is not to be diluted with petroleum solvents
(4) N/A since product is not recommended for use around electrical equipment
(5) Aqueous solution
(6) In progress

Signature	Name and Title: Jeffrey H. Birk Regulatory Manager	Date 6-27-13

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

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DATA MATRIX

Date 6-27-13	EPA Reg No./File Symbol 7969-GUL	Page 1 of 3
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, P.O. Box 13528, Research Triangle Park, NC 27709-3528	**Product:** **Engenia herbicide**	

Ingredient N,N-Bis-(3-aminopropyl) methylamine Salt of 3,6-dichloro-o-anisic acid
CAS Registry Number 1286239-22-2

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
810.1000	Summary data for amine salts of Dicamba:Doc ID 2010/7009194	48144201	BASF Corporation	Own	
Supplemental	Dissociation rates of salts of Dicamba: Doc ID 2010/7008548	48144202	BASF Corporation	Own	
	Product Identity and Composition				
830.1550 (61-1)	Product identity and composition: Doc ID 2011/7002586	48599301	BASF Corporation	Own	
830.1600 (61-2)	Description of materials used to produce	48599301	BASF Corporation	Own	
	the product: Doc ID 2011/7002586				
830.1620 (61-2)	Description of the production process				N.R.[1]
830.1650	Description of formulation process: Doc ID 2011/7002586	48599301	BASF Corporation	Own	
830.1670 (61-3)	Discussion of formation of impurities: Doc ID 2011/7002586	48599301	BASF Corporation	Own	
	Analysis and Certified Limits				
830.1700 (62-1)	Preliminary Analysis				N.R.[1]
830.1750 (62-2)	Certified limits: Doc ID 2011/7002586	48599301	BASF Corporation	Own	
830.1800 (62-3)	Enforcement analytical method: Doc ID 2011/7002586	48599301	BASF Corporation	Own	
	Physical and Chemical Characteristics				
830.6302 (63-2)	Color: Doc ID 2011/7004945	48599302	BASF Corporation	Own	

Signature	Name and Title: Jeffrey H. Birk Regulatory Manager	Date 6-27-13

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DATA MATRIX

Date 6-27-13	**EPA Reg No./File Symbol** 7969-GUL	Page 2 of 3
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, P.O. Box 13528, Research Triangle Park, NC 27709-3528	**Product:** **Engenia herbicide**	
Ingredient N,N-Bis-(3-aminopropyl) methylamine Salt of 3,6-dichloro-o-anisic acid CAS Registry Number 1286239-22-2		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
830.6303 (63-3)	Physical state: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.6304 (63-4)	Odor: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.6313 (63-13)	Stability to normal and elevated temperatures,				N.R.[2]
	metals, and metal ions				
830.7300 (63-7)	Density, bulk density or specific gravity: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.7000 (63-12)	pH: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.6314 (63-14)	Oxidizing or reducing action: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.6315 (63-15)	Flammability				N.R.[5]
830.6316 (63-16)	Explodability				N.R.[5]
830.6317 (63-17)	Storage stability	49159601	BASF Corporation	Own	N.R.[6]
830.7100 (63-18)	Viscosity: Doc ID 2011/7004945	48599302	BASF Corporation	Own	
830.6319 (63-19)	Miscibility				N.R.[3]
830.6320 (63-20)	Corrosion characteristics		BASF Corporation	Own	N.R.[6]
830.6321 (63-21)	Dielectric breakdown voltages				N.R.[4]
830 Series	Phys/Chem Properties Summary: Doc ID 2011/7004973	48599302	BASF Corporation	Own	

Signature	**Name and Title:** Jeffrey H. Birk Regulatory Manager	**Date** 6-27-13

EPA Form 8570-35 (9-97) Electronic and Paper versions available. Submit only Paper version.

Agency Internal use Copy

Form Approved OMB No. 2070-0060

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WASHINGTON, D.C. 20460

DATA MATRIX

Date 6-27-13	EPA Reg No./File Symbol 7969-GUL	Page 3 of 3
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, P.O. Box 13528, Research Triangle Park, NC 27709-3528	**Product:** Engenia herbicide	
Ingredient N,N-Bis-(3-aminopropyl) methylamine Salt of 3,6-dichloro-o-anisic acid CAS Registry Number 1286239-22-2		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
835.2120 (161-1)	Hydrolysis: Doc ID 2000/5000164	48144203	BASF Corporation	Own	
	Acute Testing				
870.1100 (81-1)	Acute oral toxicity: Doc ID 2010/1105428	48599303	BASF Corporation	Own	
870.1200 (81-2)	Acute dermal toxicity: Doc ID 2010/1105429	48599304	BASF Corporation	Own	
870.1300 (81-3)	Acute inhalation toxicity: Doc ID 2011/1042494	48599305	BASF Corporation	Own	
870.2400 (81-4)	Primary eye irritation: Doc ID 2010/1105430	48599306	BASF Corporation	Own	
870.2500 (81-5)	Primary dermal irritation: Doc ID 2010/1105431	48599307	BASF Corporation	Own	
870.2600 (81-6)	Dermal sensitization: Doc ID 2010/1166272	48599308	BASF Corporation	Own	
870.supplemental	Dicamba amines- hazard potential assessment: Doc ID 2011/7002365	48599309	BASF Corporation	Own	

Footnotes:
(1) Data not submitted because end-use product is not produced by an intergrated formulation system.
(2) Not required for an end-use product.
(3) Not required because product is not an emulsifiable liquid and is not to be diluted with petroleum solvents
(4) N/A since product is not recommended for use around electrical equipment
(5) Aqueous solution
(6) In progress

Signature	Name and Title: Jeffrey H. Birk Regulatory Manager	Date 6-27-13

Please read instructions on reverse before completing form. Form Approved. OMB No. 2070-0060. Approval expires 2-28-95

EPA

United States
Environmental Protection Agency
Washington, DC 20460

☑ **Registration**
☐ **Amendment**
☐ **Other**

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
7969-GUL	Kathryn Montague	☐ None ☐ Restricted
4. Company/Product (Name)	**PM#**	
Engenia herbicide	23	

5. Name and Address of Applicant *(Include ZIP Code)*

BASF
26 Davis Drive
Research Triangle Park, NC 27709

☐ *Check if this is a new address*

6. Expedited Reveiw. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:

EPA Reg. No. _____

Product Name _____

Section - II

☐ Amendment - Explain below.
☐ Resubmission in response to Agency letter dated _____
☐ Notification - Explain below.
☐ Final printed labels in repsonse to Agency letter dated _____
☐ "Me Too" Application.
☑ Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Submission of additional data in support of the proposed Engenia herbicide, registration action, 7969-GUL.
This submission is not subject to a PRIA fee
Contact Jeff Birk at 919-547-2622 (phone), 919-547-2850 (fax) or by Email at jeffrey.birk@basf.com

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Metal ☐ Plastic ☐ Glass ☐ Paper ☐ Other (Specify)
Certification must be submitted	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
☐ Label ☐ Container		

6. Manner in Which Label is Affixed to Product ☐ Lithograph ☐ Paper glued ☐ Stenciled ☐ Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
Jeffrey H. Birk	Regulatory Manager	919-547-2622

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowlingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received **(Stamped)**

2. Signature	3. Title	
	Regulatory Manager	E-SUBMISSION
4. Typed Name	**5. Date**	
Jeffrey H. Birk	June 27, 2013	

EPA Form 8570-1 (Rev. 3-94) Previous editions are obsolete. White - EPA File Copy (original) Yellow - Applicant Copy

BASF

The Chemical Company

Kathryn Montague (PM 23)
Document Processing Desk (APPL)
Office of Pesticide Programs (7504P)
U.S. Environmental Protection Agency
One Potomac Yard
Room S4900
2777 South Crystal Drive
Arlington, VA 22202-4501

March 27, 2013

RE: Data Access Limited Authorization Letter

Dear Ms. Montague:

Reference is hereby made to data supporting the registration of **Dicamba Technical herbicide** (EPA Reg. No. 7969-132), and **Engenia herbicide** (EPA File Symbol. 7969-GUL) submitted by BASF Corporation (EPA Company Number 7969) (**"BASF"**) for use in dicamba tolerant soybeans. Monsanto Company (EPA Company Number 524) (**"Monsanto"**) has submitted a registration application to the US Environmental Protection Agency (**"EPA"**) for **M1691 herbicide** (EPA Reg. No. 524-582), for use in dicamba tolerant soybeans (the **"Monsanto Registration Application"**). Monsanto has approached BASF for a letter of authorization to cite BASF dicamba volatility and spray drift data that was recently submitted supporting dicamba and relevant end-use product(s) (the **"BASF Dicamba Data"**) and, pursuant to a written agreement between BASF and Monsanto, BASF has agreed to grant to Monsanto the following limited right to cite to the relevant BASF Dicamba Data. The MRIDs for the BASF Dicamba Data are 49067701 through 49067706.

For the period commencing on the date first set forth above by BASF in accordance with the terms of the agreement between BASF and Monsanto (the **"Citation Period"**), this data access limited authorization letter (**"Letter"**) authorizes EPA personnel to reference, upon the request of Monsanto, the BASF Dicamba Data for the exclusive purpose of supporting the Monsanto Registration Application for **M1691 herbicide**.

This Letter only allows EPA personnel to utilize the BASF Dicamba Data for the purpose exclusively. The BASF Dicamba Data shall not be made part of Monsanto's or any of its affiliates' product registration files, or disclosed to Monsanto, any of its affiliates, or any other registrant without BASF's prior written consent. The right granted hereunder may not be assigned or transferred to any Person without the prior written consent of BASF. This Letter does not imply any waiver, abdication, conveyance, or transfer of any interest, right, or title in or to the BASF Dicamba Data. Accordingly, BASF retains and reserves all existing data ownership and compensation rights in and to all BASF Dicamba Data.

Please do not hesitate to contact me (919-547-2622 or jeffrey.birk@basf.com) if you have any questions.

Respectfully submitted,

Jeffrey H. Birk
Regulatory Manager
U.S. Regulatory Affairs

Walsh, Michael

From: Jeffrey H Birk [jeffrey.birk@basf.com]
Sent: Friday, March 29, 2013 9:05 AM
To: Walsh, Michael
Subject: Re: March 27, 2013 authorization letter. Dicamba BAPMA salt actions.

Mike,

Thanks for the reminder. A copy was provided to Monsanto for their use when citing the data.

Jeff

From: "Walsh, Michael" [Walsh.Michael@epa.gov]
Sent: 03/28/2013 09:24 PM GMT
To: Jeffrey Birk
Subject: March 27, 2013 authorization letter. Dicamba BAPMA salt actions.

Dear Dr. Birk:

We received your March 27, 2013 Data Access Limited Authorization Letter regarding Monsanto use of BASF dicamba volatility and spray drift data.

Please note that this letter should be provided to Monsanto when they submit an action to the Agency where they cite the volatility and drift data.

Thank you for your prompt attention to this matter.

-Mike

Michael Walsh
Registration Division, Herbicide Branch
Office of Pesticide Programs
U.S. EPA

BASF

The Chemical Company

March 25, 2013

Document Processing Desk (**APPL**)
Ms. Kathryn Montague
Product Management (23)
Registration Division (H-7505C)
Office of Pesticide Programs
U.S. Environmental Protection Agency
2777 S. Crystal Drive
Arlington, VA 22202

RE: Data submission in support of Pending Registration Petition
Engenia herbicide (EPA Reg. No. 7969-GUL)

Dear Ms. Montague:

BASF is submitting the requested data as a follow up to our meeting with EFED on February 12, 2013, discussing the volatility and physical drift characteristics of dicamba, in support of the pending registration action for Engenia herbicide (7969-GUL). Included in the submission are the following reports:

- Summary Report: Dicamba Behavior Based on Various Guideline Environmental Fate Studies
- Rate of degradation of 14C- phenyl labeled SAN 837 (Dicamba) in various soils under laboratory conditions at 20°C.
- Evaporation behavior of the test substances Dicamba from soil and plants (model Chamber)
- Evaporation behavior from soil and plants (large scale model chamber) Frontier Herbicide, dimethenamid
- Off field Deposition of BAS 183 H Containing Formulations Using Various Nozzles
- Summary Report: Dicamba Delayed Injury Response in Sensitive Plants

There is no PRIA fee required for this ongoing action.

Under the current electronic guidelines, BASF Corporation is submitting all administrative documents and scientific reports for this submission exclusively in electronic (XML) format in lieu of paper copies. MRID numbers are already assigned for scientific reports.

Included with the administrative documents are the following:

- EPA Application form 8570-1
- Certificate with Respect to Citation of Data form 8570-34
- Dicamba Technical herbicide internal and public data matrix

Thank you for your assistance with this matter. If you should have any questions, please feel free to call me at (919) 547-2622.

Regards,

Jeffrey H. Birk, Ph.D.
Regulatory Manager
Phone 919-547-2622
Fax: 919-547-2850
Email: jeffrey.birk@basf.com

Vol. No.	OPPTS No.	Study References	MRID No.
1	n/a	Administrative Documents	No Data
2	835.1410 (163-2)	Jonas W. **Evaporation behaviour of the test substance 14C-Dicamba from soil and plants (model chamber) - Test product: SAN 1411 H 167 SL 003 BS.** **Study ID(s):** NA 96 9408/1 June 16, 1997. BASF Reg. Doc. # 1997/5000070. 48 pages.	**49067701**
3	835.Supp	Glaenzel A. **Rate of degradation of 14C-phenyl labelled SAN 837 H (Dicamba) in various soils under laboratory conditions at 20°C.** **Study ID(s):** 99AG08; 5965 December 14, 2000. BASF Reg. Doc. # 2000/5000171. 81 pages.	**49067702**
4	835.1410 (163-2)	Jonas W. **Evaporation behaviour from soil and plants (large-scale model chamber) - Test product: Frontier (SAN 582 H 900 EC 408 DP) - Test substance: (3-14C-thienyl)-Dimethenamid.** **Study ID(s):** NA 94 9405 September 21, 1994. BASF Reg. Doc. # 1994/10642. 66 pages.	**49067703**
5	840.1100 840.1200	Jackson S.H. **Off field deposition of BAS 183 .. H containing formulations using various nozzles.** Study ID(s): 429625; 2473 March 01, 2013. BASF Reg. Doc. # 2012/7005414. 264 pages	**49067704**
6	Supplemental	Birk J.H. **Dicamba delayed injury response in sensitive plants.** Study ID(s): n/a March 15, 2013. BASF Reg. Doc. # 2013/7000699. 21 pages.	**49067705**
7	Supplemental	Jackson S.H. **Dicamba behavior based on various guideline environmental fate studies.** Study ID(s): n/a March 12, 2013. BASF Reg. Doc. # 2013/7000538. 480 pages	**49067706**

BASF

The Chemical Company

48718000

April 4, 2012

Document Processing Desk (APPL)
Ms. Kathryn Montague
Product Management (23)
Registration Division (H-7505C)
Office of Pesticide Programs
U.S. Environmental Protection Agency
2777 S. Crystal Drive
Arlington, VA 22202

RE: Application for product registration
Engenia herbicide (EPA Reg. No. 7969)

Dear Ms. Montague:

BASF is submitting an application for the registration of Engenia herbicide. Engenia herbicide is formulated as a new salt of dicamba and the proposed uses are the same as those already approved for Clarity herbicide (7869-137). The proposed uses also include the expanded use in soybeans to include postemergence use in dicamba tolerant soybeans. Dicamba tolerant soybeans are currently being developed by Monsanto with trait deregulation expected later this year. A letter of access is included from Monsanto, allowing BASF to cite the necessary Monsanto data in support of the dicamba tolerant soybean use.

As agreed upon in the Pre-Application Study Plan and Study Waiver Request from January 13, 2011, BASF is submitting the agreed upon additional mammalian toxicology, ecotoxicology and environmental fate studies. A response for the requested subchronic dermal, inhalation, feeding and developmental testing was submitted previously (Chukwudebe A. **Dicamba-DETA and Dicamba-BAPMA salts - Hazard profiles, substantial similarities and respective toxicity end points - An assessment.** September 15, 2011. BASF Reg. Doc. # 2011/7002365. 43 pages. MRID 48599309).

This registration action is a PRIA R320.

Under the current electronic guidelines, BASF Corporation is submitting all administrative documents and scientific reports for this submission exclusively in electronic (XML) format in lieu of paper copies. MRID numbers are already assigned for scientific reports.

Included with the administrative documents are the following:

- EPA Application form 8570-1
- Certificate with Respect to Citation of Data form 8570-34
- PRIA payment receipt
- Letter of Access from Monsanto
- Engenia internal and public data matrix
- Dicamba Technical herbicide internal and public data matrix
- Engenia herbicide Confidential Statement of Formula
- Proposed labeling for Engenia herbicide

Thank you for your assistance with this matter. If you should have any questions, please feel free to call me at (919) 547-2622.

Regards,

Jeffrey H. Birk, Ph.D.
Regulatory Manager
Phone 919-547-2622
Fax: 919-547-2850
Email: jeffrey.birk@basf.com

BASF
The Chemical Company

Vol. No.	OPPTS No.	Study References	MRID No.
1	n/a	Administrative Documents in a folder	No Data
2	870.5100	Woitkowiak C. **BAS 183 22 H - *Salmonella typhimurium / Escherichia coli* reverse mutation assay.** Study ID#(s) 40M0040/10M185; 378948 January 31, 2012. BASF Reg. Doc. # 2011/1277500. 54 pages.	**48718001**
3	870.5300	Schulz M., Landsiedel R. **BAS 183 22 H - In vitro gene mutation test in CHO cells (HPRT locus assay).** Study ID#(s) 50M0040/10M183; 378951 March 05, 2012. BASF Reg. Doc. # 2012/1016696. 61 pages.	**48718002**
4	870.5375	Schulz M., Landsiedel R. **BAS 183 22 H - In vitro chromosome aberration assay in V79 cells.** Study ID#(s) 32M0040/10M184; 378952 March 05, 2012. BASF Reg. Doc. # 2012/1015454. 82 pages.	**48718003**
5	870.5395	Schulz M., Landsiedel R. **BAS 183 22 H - Micronucleus test in bone marrow cells of the mouse.** Study ID#(s) 26M0040/10M186; 378954 March 21, 2012. BASF Reg. Doc. # 2012/1022028. 47 pages.	**48718004**
6	835.6100	Newcombe A. et al. **Dissipation of Dicamba following application of formulation BAS 183 22 H to bare soil plots at test sites located in California, Georgia, Illinois, and Iowa.** Study ID#(s) 408417 March 31, 2012. BASF Reg. Doc. # 2012/7000492. 353 pages.	**48718005**
7	850.2200	Zok S. **BAS 183 22 H - Acute toxicity in the bobwhite quail (*Colinus virginianus*) after single oral administration (LD50).** Study ID#(s) 11W0040/10W007; 395294 March 31, 2011. BASF Reg. Doc. # 2011/1009248. 64 pages.	**48718006**
8	850.1300	Nierzedska E. **BAS 183 WB H - *Daphnia magna* reproduction test.** Study ID#(s) W/05/11; 395296; 1992067 December 21, 2011. BASF Reg. Doc. # 2011/1074513. 78 pages.	**48718007**
9	850.1075	Salinas E. **BAS 183 WB H - Acute toxicity study in the fathead minnow (*Pimephales promelas*).** Study ID#(s) 19F0040/10E122; 395298 August 05, 2011. BASF Reg. Doc. # 2011/1140831. 38 pages.	**48718008**
10	850.5400	Swierkot A. **BAS 183 WB H - *Pseudokirchneriella subcapitata* SAG 61.81. growth inhibition test.** Study ID#(s) W/06/11; 395300; 1992079 July 01, 2011. BASF Reg. Doc. # 2011/1079991. 47 pages.	**48718009**

Vol. No.	OPPTS No.	Study References	MRID No.
11	850.1400	Salinas E. **BAS 183 H (Dicamba techn.) - Early life-stage toxicity test on the fathead minnow (*Pimephales promelas*) in a flow through system.** Study ID#(s) 50F0267/97E002; 405803 August 04, 2011. BASF Reg. Doc. # 2011/1142337. 95 pages.	**48718010**
12	850.1500	Minderhout T. et al. **Dicamba acid: An early life-stage toxicity test with the sheepshead minnow (*Cyprinodon variegatus*).** Study ID#(s) 405804; 147A-278 January 11, 2012. BASF Reg. Doc. # 2011/7006569. 85 pages.	**48718011**
13	850.1350	Claude M.B. et al. **Dicamba acid: A flow-through life-cycle toxicity test with the saltwater mysid (*Americamysis bahia*).** Study ID#(s) 405805; 147A-277B February 13, 2012. BASF Reg. Doc. # 2012/7000027. 123 pages.	**48718012**
14	850.2100	Hubbard P.M., Beavers J.B. **Dicamba technical: An acute oral toxicity study with the zebra finch (*Taeniopygia guttata*).** Study ID#(s) 405806; 147-255 July 18, 2011. BASF Reg. Doc. # 2011/7002392. 58 pages.	**48718013**
15	850.4200	Porch J.R. et al. **BAPMA formulation: A toxicity test to determine the effects on (Tier II) seedling emergence of ten species of plants.** Study ID#(s) 405807; 147-251 November 30, 2011. BASF Reg. Doc. # 2011/7006351. 127 pages.	**48718014**
16	850.4250	Porch J.R. et al. **BAPMA formulation: A toxicity test to determine the effects (Tier II) on vegetative vigor of ten species of plants.** Study ID#(s) 405808; 147-252 December 14, 2011. BASF Reg. Doc. # 2011/7006488. 204 pages.	**48718015**

Fw: Pay.gov Payment Confirmation: PRIA Service Fees
Jeffrey H Birk to: neda.nejad 04/02/2012 01:50 PM

From: Jeffrey H Birk/APN/RTP/BASF-CORP/BASF
To: neda.nejad@basf.com

In case you did not get this.

Jeff

----- Original Message -----
From: paygovadmin
Sent: 04/02/2012 01:45 PM AST
To: Jeffrey Birk
Subject: Pay.gov Payment Confirmation: PRIA Service Fees

Your payment has been submitted to Pay.gov and the details are below. If you have any questions or you wish to cancel this payment, please contact Pay.gov Customer Service by phone at (800) 624-1373 or by email at pay.gov.clev@clev.frb.org.

Application Name: PRIA Service Fees
Pay.gov Tracking ID: 2567V3F9
Agency Tracking ID: 74297871850
Transaction Type: Sale
Transaction Date: Apr 2, 2012 1:45:58 PM

Account Holder Name: John J Arthur
Transaction Amount: $11,996.00
Billing Address: BASF Corporation
Billing Address 2: 26 Davis Drive
City: Durham
State/Province: NC
Zip/Postal Code: 27709
Country: USA
Card Type: MasterCard
Card Number: **********8166

Decision Number:
Registration Number:
Company Name: BASF Corporation
Company Number: 7969
Action Code: R320

THIS IS AN AUTOMATED MESSAGE. PLEASE DO NOT REPLY.

MONSANTO

MONSANTO COMPANY
1300 I (Eye) Street, NW
Suite 450 East
Washington, D.C. 20005
http://www.monsanto.com

Hand Delivered

April 4, 2012

Helen Mero
Regulatory Affairs Manager
314-694-2756

Document Processing Desk
Office of Pesticide Programs
U.S. Environmental Protection Agency
One Potomac Yard
2777 South Crystal Drive, Room S4900
Arlington, VA 22202-4501

Attention: Kathryn Montague
PM Team 23

Re: Data Access Limited Authorization Letter

Dear Ms. Montague:

Reference is hereby made to data supporting the registration of **M1691 herbicide** (EPA Reg. No. 524-582) submitted by Monsanto Company (EPA Company Number 524) ("**Monsanto**") for use in dicamba tolerant soybeans.

BASF Corporation (EPA Company Number 7969) ("**BASF**") desires to submit a registration application to the US Environmental Protection Agency ("**EPA**) for **Engenia herbicide**, for use in dicamba tolerant soybeans (the "**BASF Registration Application**"). BASF has approached Monsanto for a letter of authorization to cite to data supporting the use of **M1691 herbicide** in dicamba tolerant soybeans (the "**Monsanto Dicamba Data**") and, pursuant to a written agreement between Monsanto and BASF, Monsanto has agreed to grant to BASF the following limited right to cite to the relevant Monsanto Dicamba Data.

For the period commencing on the date first set forth above by Monsanto in accordance with the terms of the agreement between Monsanto and BASF (the "**Citation Period**"), this data access limited authorization letter ("**Letter**") authorizes EPA personnel to reference, upon the request of BASF, the Monsanto Dicamba Data for the exclusive purpose of supporting the use of **Engenia herbicide** in dicamba tolerant soybeans as requested in the BASF Registration Application ("**Purpose**").

This letter only allows EPA personnel to utilize the Monsanto Dicamba Data for the Purpose exclusively. The Monsanto Dicamba Data shall not be made part of BASF's or any of its affiliates' product registration files, or disclosed to BASF, any of its affiliates, or any other registrant without Monsanto's prior written consent. The right granted hereunder may not be assigned or transferred to any Person without the prior written consent of Monsanto. This Letter does not imply any waiver, abdication,

conveyance, or transfer of any interest, right, or title in or to the Monsanto Dicamba Data. Accordingly, Monsanto retains and reserves all existing data ownership and compensation rights in and to all Monsanto Dicamba Data.

If you have any questions concerning this authorization please contact me at (314) 694-2756, or by e-mail at helen.mero@monsanto.com.

Sincerely,

Helen Mero

Helen Mero
Regulatory Affairs Manager
Monsanto Company

cc: File copy

Form Approved OMB Nos. 2070-0060; 2070-0057; 2070-0107; 2070-0122; 2070-0164

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
1200 Pennsylvania Avenue, N.W.
WASHINGTON, D.C. 20460

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Certification with Respect to Citation of Data

Applicant's/Registrant's Name, Address, and Telephone Number BASF, 26 Davis Drive, Research Triangle Park, NC 27709; 919-547-2000	EPA Registration Number/File Symbol 7969-132
Active Ingredient(s) and/or representative test compound(s) Dicamba (3,6-dichloro-o-anisic acid)	Date March 28, 2012
General Use Pattern(s) (list all those claimed for this product using 40 CFR Part 158) Technical for: Terrestrial Food Crop, Terrestrial Non-Food Crop	Product Name Dicamba Technical Herbicide

NOTE: If your product is a 100% repackaging of another purchased EPA-registered product labeled for all the same uses on your label, you do not need to submit this form. You must submit the Formulator's Exemption Statement (EPA Form 8570-27).

☐ I am responding to a Data-Call-In Notice, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).

SECTION I: METHOD OF DATA SUPPORT (Check one method only)

☐ I am using the cite-all method of support, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).	☑ I am using the selective method of support (or cite-all option under the selective method), and have included with this form a completed list of data requirements (the Data Matrix form must be used).

SECTION II: GENERAL OFFER TO PAY

[Required if using the cite-all method or when using the cite-all option under the selective method to satisfy one or more data requirements]

☑ I hereby offer and agree to pay compensation, to other persons, with regard to the approval of this application, to the extent required by FIFRA.

SECTION III: CERTIFICATION

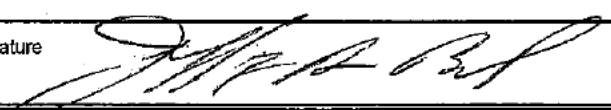
I certify that this application for registration, this form for reregistration, or this Data-Call-In response is supported by all data submitted or cited in the application for registration, the form for reregistration, or the Data-Call-In response. In addition, if the cite-all option or cite-all option under the selective method is indicated in Section I, this application is supported by all data in the Agency's files that (1) concern the properties or effects of this product or an identical or substantially similar product, or one or more of the ingredients in this product; and (2) is a type of data that would be required to be submitted under the data requirements in effect on the date of approval of this application if the application sought the initial registration of a product of identical or similar composition and uses .

I certify that for each exclusive use study cited in support of this registration or reregistration, that I am the original data submitter or that I have obtained the written permission of the original data submitter to cite that study.

I certify that for each study cited in support of this registration or reregistration that is not an exclusive use study, either: (a) I am the original data submitter; (b) I have obtained the permission of the original data submitter to use the study in support of this application; (c) all periods of eligibility for compensation have expired for the study; (d) the study is in the public literature; or (e) I have notified in writing the company that submitted the study and have offered (i) to pay compensation to the extent required by sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA; and (ii) to commence negotiations to determine the amount and terms of compensation, if any, to be paid for the use of the study.

I certify that in all instances where an offer of compensation is required, copies of all offers to pay compensation and evidence of their delivery in accordance with sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA are available and will be submitted to the Agency upon request. Should I fail to produce such evidence to the Agency upon request, I understand that the Agency may initiate action to deny, cancel or suspend the registration of my product in conformity with FIFRA.

I certify that the statements I have made on this form and all attachments to it are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

Signature	Date	Typed or Printed Name and Title
	3-28-12	Jeffrey H. Birk/Product Registration Manager

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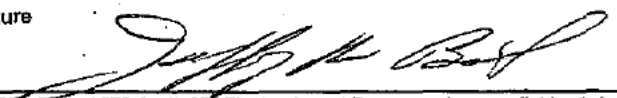
DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 1 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
61 - series	830 Series	Dicamba Technical Product Identity and Composition; Lab Project Number: 050594-1	43231801	BASF Corporation	OWN	
62 series	830 Series	Dicamba Tech Analysis and Certification of Product Ingredients: Lab Proj Number: 050594-2.	43231802	BASF Corporation	OWN	
61-2; 62-3	830 Series	Analysis for 2,3,7,8-TCCD or its Precursors in Samples from the Dicamba Process	40874902	BASF Corporation	OWN	1980/5084
61-2; 62-3	830 Series	Analysis of Dichlorodibenzenzo-p-dioxin in Technical Dicamba, Banvel Herbicide	40874903	BASF Corporation	OWN	
61-2	830 Series	Theoretical Discussion of Development of HDD/HDF Impurities in Dicamba Manufacture	40874901	BASF Corporation	OWN	
62-series	830 Series	Analysis of Chlorinated Cogeners of 2,3,7,8-TCDD/TCDF in Technical Dicamba	41824001	BASF Corporation	OWN	1991/5260
	830.1700	Preliminary Analysis	47373601	BASF Corporation	OWN	
63-2	830.6302	Color of Banvel Herbicide, Anhydrous, Technical	43643806	BASF Corporation	OWN	1995/5237
63-3	830.6303	Physical State of Banvel Herbicide, Anhydrous, Technical	43643807	BASF Corporation	OWN	1995/5238
63-4	830.6304	Determination of Odor of Anhydrous Dimethylamine salt of Dicamba	43758503	BASF Corporation	OWN	1995/5268
63-5	830.7200	Melting Point of Banvel Herbicide, Anhydrous, Technical	43643808	BASF Corporation	OWN	1995/5240

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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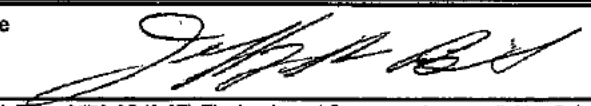
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
63-7	830.7300	Tap Density of Banvel Herbicide, Anhydrous Technical	43643809	BASF Corporation	OWN	1995/5239
63-10	830.7370	Dissociation Constant of Dicamba: Final Report	43140308	BASF Corporation	OWN	1993/5249
63-10	830.7370	Dissociation Rate of Dicamba Salts	43288001	BASF Corporation	OWN	1994/5238
63-11	830.7570	Determination of n-Octanol/Water Partition Coefficient for 3,6-Dichlorosalicyclic Acid (DCSA)	41966601	BASF Corporation	OWN	1989/5229
63-12	830.7000	pH of Banvel Herbicide, Anhydrous, Technical	43643810	BASF Corporation	OWN	1995/5241
63-13		Stability of Dicamba Tech	43231803	BASF Corporation	OWN	
71-1	850.2100	Amendment to Report Acute Oral LD50-Mallard Duck Banvel Technical:Final Report	00159794	BASF Corporation	OWN	1977/5070
71-1	850.2100	(dicamba)-3 Lb./Gal. Isopropylamine Salt of Dicamba: An Acute oral Tox Study w/ Bobwhite	00164105	BASF Corporation	OWN	1986/5144
71-1	850.2100	Technical Dicamba: An Acute Oral Toxicity Study with the Mallard	42774106	BASF Corporation	OWN	1993/5245
71-1	850.2100	Technical Dicamba: An Acute Oral Toxicity with the Northern Bobwhite: Report Amendment	42774105 42918001	BASF Corporation	OWN	1993/5238
71-1	850.2100	Technical Dicamba Acute Oral Toxicity Study with passerine species (zebra finch)	48718013	BASF Corporation	OWN	2011/7002392
71-2	850.2200	Eight-Day Dietary LC50 Bobwhite	.0034693	BASF Corporation	OWN	1974/5132

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 3 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	Product: Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
71-2	850.2200	Eight Day Dietary LC50 – Mallard – Banvel	0022527	BASF Corporation	OWN	1974/5133
71-2	850.2200	Eight Day Dietary LC50 – Mallard –	0025317	BASF Corporation	OWN	1974/5168
71-2	850.2200	Eight-Day Dietary LC50 Bobwhite	0025318	BASF Corporation	OWN	1974/5169
71-2	850.2200	Eight Day Dietary LC50 – Mallard – (Banvel Sodium Salt)	00025327 00030102	BASF Corporation	OWN	1975/5143
71-2	850.2200	Eight-Day Dietary LC50 Bobwhite – (Banvel Sodium Salt)	00025328 00030102	BASF Corporation	OWN	1975/5144
71-2	850.2200	Eight-Day Dietary LC50 Mallard Ducks, Banvel	00037628	BASF Corporation	OWN	1977/5071
71-2	850.2200	Diglycolamine Salt of Dicamba: A Dietary LC 50 Study – Mallard	00162072	BASF Corporation	OWN	1986/5152
71-2	850.2200	Eight-Day Dietary LC50 Bobwhite Quail, Banvel Technical	00025391	BASF Corporation	OWN	1977/5072
71-2	850.2200	Diglycolamine Salt of Dicamba: A Dietary LC 50 Study – Bobwhite	00162071	BASF Corporation	OWN	1986/5163
71-2	850.2200	BAPMA Salt of Dicamba: A Dietary LC 50 Study – Bobwhite	48718006	BASF Corporation	OWN	2011/1009248
71-4	850.2300	Technical Dicamba: A Reproduction Study with the Northern Bobwhite	43814004	BASF Corporation	OWN	1994/5320

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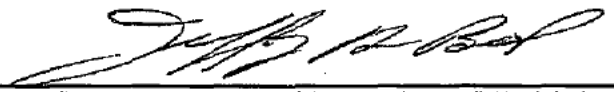	Jeffrey H. Birk Regulatory Manager	3-23-12

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Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 4 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
71-4	850.2300	Technical Dicamba: A Reproduction Study with the Mallard	43814003	BASF Corporation	OWN	1994/5319
72-1	850.1075	The Acute Toxicity of Five Velsicol Pesticides to the Bluegill	22530	BASF Corporation	OWN	1971/5013
72-1	850.1075	The Acute Toxicity of Banvel XP to the Rainbow Trout	36915	BASF Corporation	OWN	1974/5150
72-1	850.1075	The Acute Toxicity of Banvel 2S to the Rainbow Trout	29623	BASF Corporation	OWN	1974/5153
72-1	850.1075	The Acute Toxicity of Banvel 2S to the Bluegill	225393	BASF Corporation	OWN	1974/5154
72-1	850.1075	The Acute Toxicity of Banvel Technical to the Rainbow Trout	00041272	BASF Corporation	OWN	1977/5069
72-1	850.1075	The Acute Toxicity of Banvel Technical to the Bluegill Sunfish	00034703	BASF Corporation	OWN	1977/5075
72-1	850.1075	Acute Toxicity of CST/Stumpbuster to Bluegill Sunfish	46183	BASF Corporation	OWN	1980/5118
72-1	850.1075	Acute Toxicity of CST/Stumpbuster to Rainbow Trout	46184	BASF Corporation	OWN	1980/5119
72-1	850.1075	Acute Toxicity of CN-10-6471 (Banvel Herbicide) to Bluegill Sunfish	00153150	BASF Corporation	OWN	1985/5103
72-1	850.1075	Acute Toxicity of CN-10-6471 (Banvel Herbicide) to Rainbow Trout	00153151	BASF Corporation	OWN	1985/5104

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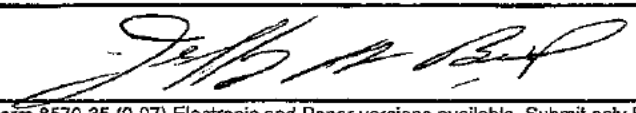	Jeffrey H. Birk Regulatory Manager	3-23-12

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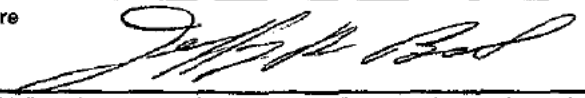
Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 5 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient: Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
72-1	850.1075	Acute Toxicity of CN-11-4962 (Diglycoamine salt) to Bluegill Sunfish	00162067	BASF Corporation	OWN	1986/5147
72-1	850.1075	Acute Toxicity of CN-11-4962 (Diglycoamine salt) to Rainbow Trout	00162068	BASF Corporation	OWN	1986/5150
72-1	850.1075	Acute Toxicity of Banvel Herbicide to Rainbow Trout	00100611	BASF Corporation	OWN	1981/5179
72-2	850.1010	Acute Toxicity of Banvel 2S to the Water Flea, Daphnia magna	85935	BASF Corporation	OWN	1977/5131
72-2	850.1010	Acute Toxicity of Banvel Herbicide to Daphnia Magna	00073276	BASF Corporation	OWN	1979/5068
72-2	850.1010	Acute Toxicity of CN-10-6471 (Banvel Herbicide) to Daphnia magna	00153152	BASF Corporation	OWN	1985/5098
72-2	850.1010	Acute Toxicity of CN-11-4962 (Diglycoamine salt) to Daphnia magna	00162069	BASF Corporation	OWN	1986/5148
72-3	850.1035	Acute Toxicity of Banvel Technical to the Grass Shrimp	00034702	BASF Corporation	OWN	1977/5076
72-3	850.1035	Acute Toxicity of Banvel Technical to the Fiddler Crab	00034704	BASF Corporation	OWN	1977/5077
72-3a	850.1075	Acute Toxicity BAPMA salt of dicamba to Sheepshead Minnow	48718008	BASF Corporation	OWN	2011/1140831
72-3a	850.1075	Acute Toxicity of Banvel technical to the Sheepshead Minnow	00025390	BASF Corporation	OWN	1977/5078

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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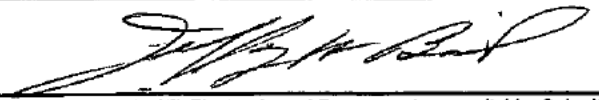
Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 6 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient: Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
72-4	850.1300	Chronic Toxicity of BAPMA salt of dicamba to Daphnia Magna	48718007	BASF Corporation	OWN	2011/1074513
72-4	850.1350	Chronic estuarine/marine invertebrate (mysid) with dicamba technical	48718012	BASF Corporation	OWN	2012/70000027
72-4	850.1400	Chronic freshwater fish ELS with dicamba acid	48718010	BASF Corporation	OWN	2011/1142337
72-5	850.1500	Chronic estuarine/marine fish ELS with dicamba acid	48718011	BASF Corporation	OWN	2011/7006569
81-1	870.1100	Acute oral toxicity / rat	00023692 00078444	BASF Corporation	OWN	1966/5004
81-2 81-4 81-5	870.1200 870.2400 870.2500	Cute Toxicity Studies in Rats and Rabbits, Banvel Technical	25372	BASF Corporation	OWN	1974/5140
81-3	870.1300	The acute Toxicity of Inhaled Banvel 480 (Banvel Herbicide)in the Albino Rat	00143011	BASF Corporation	OWN	1984/5068
81-3	870.1300	Four-Hour Acute Aerosol Inhalation Toxicity Study in Rat of CN-11-4962	00162065	BASF Corporation	OWN	1985/5091
81-3	870.1300	4-hour Acute Inhalation Toxicity in Rats	47504703	BASF Corporation	OWN	2001/5003909

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	Product: Dicamba Technical Herbicide	
Ingredient: Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
81-4	870.2400	Primary Eye Irritation Study in Albino Rabbits with Technical Dicamba Lot 52625110	00144232	BASF Corporation	OWN	1984/5051
81-6	870.2600	Skin Sensitization CN-11-4962 (Diglycoamine salt)	00162064	BASF Corporation	OWN	1985/5112
81-6	870.2600	Contact hypersensitivity to Dicamba Tech	47504702	BASF Corporation	OWN	1991/12112
81-8	870.6200	Acute Neurotoxicity Study of Technical Dicamba by Gavage in Rats	42774104	BASF Corporation	OWN	1993/5248
82-1	870.3100	13-Week Dietary Toxicity Study in Rats with Dicamba	00128093	BASF Corporation	OWN	1980/5090
82-1	870.3100	13-Week Feeding study in rats (including 4-week recovery)	44623101	BASF Corporation	OWN	1997/11528
82-2	870.3200	21-Day Dermal Toxicity Study in Rabbits with Banvel Herbicide	40547901	BASF Corporation	OWN	1986/5154
82-2	870.3200	28-Day Dermal Toxicity - Rats with Dicamba Tech	45814501	BASF Corporation	OWN	2002/5004466
82-7	870.6200	Subchronic Neurotoxicity Study of Dietary Technical Dicamba in Rats: Final Report	43245210	BASF Corporation	OWN	1994/5200
83-1	870.4100	Technical Reference Standard Dicamba. One-Year Dietary Toxicity Study in Dogs	40321102	BASF Corporation	OWN	1986/5183
83-2	870-4200	Lifetime Dietary Toxicity and Oncogenicity Study in Rats (24 months)	00146150	BASF Corporation	OWN	1984/5063

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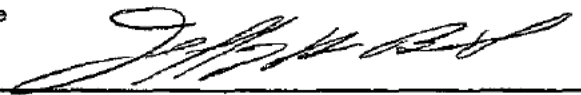	Jeffrey H. Birk Regulatory Manager	3-23-12

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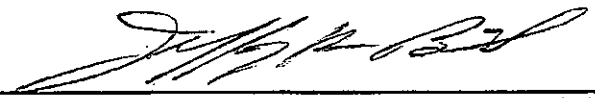
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
83-2	870.4200	Dicamba: Potential Tumorigenic Effects in Prolonged Dietary Administration to Mice	40872401	BASF Corporation	OWN	1988/5480
83-3	870.3700	Teratology Study in Albino Rats with Technical Dicamba	00084024	BASF Corporation	OWN	1981/5196
83-3	870.3700	Developmental Toxicity Study of Tech Dicamba Administered Orally via Capsule to New Zealand	42429401	BASF Corporation	OWN	1992/5230
83-4	870.3800	A Study of the Reproductive Function of Two-Generations in the Rat	43137101	BASF Corporation	OWN	1993/5280
84-2	870 Series	Salmonella Plate Incorporation Mutagenicity Assay Ames Test with a Confirmatory Assay:	43310301	BASF Corporation	OWN	1994/5250
84-2	870 Series	Micronucleus Cytogenetic Assay in Mice	43354332	BASF Corporation	OWN	1994/5291
84-2	870 Series	Dicamba: Toxicology Summary and Risk Assessment with Expanded Discussion	44609802	BASF Corporation	OWN	1997/5442
84-2	870.5300	Chromosome Aberrations in Chinese Hamster Ovary (CHO) Cells	40321101	BASF Corporation	OWN	1986/5184
84-2	870 Series	L5178Y/TK+/-Mouse Lymphoma Mutagenesis Assay with a Confirmatory Assay	43310304	BASF Corporation	OWN	1994/5247
84-2	870.5100	Ames Assay	48718001	BASF Corporation	OWN	2011/1277500
84-2	870.5300	Chromosome Aberrations in Chinese Hamster Ovary (CHO) Cells	48718002	BASF Corporation	OWN	2012/1016696

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 9 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	Product: Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
84-2	870.5375	Mammalian cell chromosome abberation	48718003	BASF Corporation	OWN	2012/1015454
84-2	870.5395	In-vivo mouse micronucleus	48718004	BASF Corporation	OWN	2012/1022028
85-1	870.7485	The Distribution and Excretion of Banvel D As Determined by Radiotracer Technique -Rats.	28261	BASF Corporation	OWN	1963/5003
85-1	870.7485	Dicamba: Physiological Dissociation of Amine Salts in Rats	43288002	BASF Corporation	OWN	1994/5240
85-1	870.7485	Report: (carbon14)-Dicamba Study of the Plasma Kinetics in Rats	44609801	BASF Corporation	OWN	1994/5238
122-1; 123-1	850.4250	Dicamba Technical Determination of Effects on Seed Germination, Seedling Emergence ...	42846301	BASF Corporation	OWN	1993/5257
123-1	850.4225	BAPMA salt of dicamba, Tier II seedling emergence	48718014	BASF Corporation	OWN	2011/7006351
123-1	850.4250	BAPMA salt of dicamba, Tier II vegetative vigor	48718015	BASF Corporation	OWN	2011/7006488
122-2; 123-2	850.4400	Dicamba Technical: Toxicity to the Freshwater Green Algae, Selenastrum Capricornutum	42774107	BASF Corporation	OWN	1993/5221
122-2; 123-2	850.4400	Dicamba Technical: Toxicity to the Freshwater Diatom, Navicula Pelliculosa	42774108	BASF Corporation	OWN	1993/5231

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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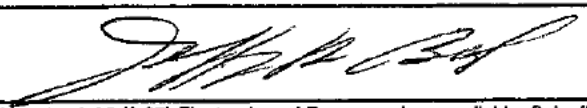
DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 10 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
122-2; 123-2	850.5400	Dicamba Technical: Toxicity to the Freshwater Alga, Anabaena flos-aquae:	42774109	BASF Corporation	OWN	1993/5246
122-2; 123-2	850.5400	Dicamba Technical: Toxicity to the Marine Diatom, Skeletenoma costatum: Final Report	42774110	BASF Corporation	OWN	1993/5239
122-2; 123-2	850.4400	BAPMA salt of dicamba toxicity to the Freshwater Green Algae, Selenastrum Capricornutum	48718009	BASF Corporation	OWN	2011/1079991
122-2; 123-2	850.4400	Dicamba Technical: Toxicity to the Duckweed, Lemna Gibba: Final Report	42774111	BASF Corporation	OWN	1993/5233
161-1	835.2120	Hydrolysis of [Carbon 14] -Dicamba	40335501	BASF Corporation	OWN	1981/5205
161-2	835.2240	Dicamba: Photodegradation Study in pH 7 Aqueous Solution: Final Report	42774102	BASF Corporation	OWN	1993/5237
161-3	835.2410	Dicamba: Photodegradation Study on Soil	42774103	BASF Corporation	OWN	1993/5244
162-1	835.4100	Aerobic Soil Metabolism of Dicamba Acid: Laboratory Final Report	43245207	BASF Corporation	OWN	1994/5222
162-1	835.4100	Aerobic Soil Metabolism of Dimethylamine, Diglycolamine, and Isopropylamine: Final Report	43866602	BASF Corporation	OWN	1995/5325
162-3	835.4400	Anaerobic Aquatic Metabolism of (Carbon 14)-Dicamba	43245208	BASF Corporation	OWN	1994/5221

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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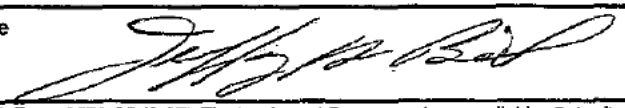
DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 11 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	Product: Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
162-3	835.4400	Anaerobic Aquatic Metabolism of Carbon-14)-Dimethylamine HCL, (Carbon-14)-Isopropylamine HCL, and (Carbon-14)-Diglycolamine HCL	44216701	BASF Corporation	OWN	1996/5391
162-4	835.4300	Results of an Aerobic Aquatic Metabolism of Dicamba Acid Study Conducted in Switzerland	43245209	BASF Corporation	OWN	1994/5234
162-4	835.4300	Aerobic Aquatic Metabolism of 14C Dicamba	43758509	BASF Corporation	OWN	1995/5270
163-1	835.1240	Soil Thin-Layer Chromatography of Dicamba and 3,6-Dichlorosalicylic Acid on Five...	40547907	BASF Corporation	OWN	1986/5185
163-1	835.1240	Soil Adsorption and Desorption of Dicamba, Unaged, by the Batch Equilibrium Method	42774101	BASF Corporation	OWN	1993/5247
163-1	835.1240	Soil Adsorption and Desorption of the Major Soil Metabolite of Dicamba, 3,6-Dichlorosalicylic Acid:	43095301	BASF Corporation	OWN	1993/5290
163-2	835.1410	Addendum to Report No. 480060-6 on Volatility of Three Dicamba Formulations	41966602	BASF Corporation	OWN	1988/5476
164-1	835.1240	Terrestrial Dissipation of Dicamba in Turf Soil in California FEP 130/90/1, Trial ID 1300160A	42754101	BASF Corporation	OWN	1991/5287
164-1	835.1240	Terrestrial Dissipation of Dicamba in Turf Soil in Indiana FEP 130/90/1, Trial ID 1300115A:	42754102	BASF Corporation	OWN	1991/5302

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 12 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
164-1	835 Series	Summation of Dicamba Dissipation and Leaching Results from Studies Conducted in Germany	42754103	BASF Corporation	OWN	
164-1	835 Series	Terrestrial Dissip[ation Study with Dicamba Formulation in Louisiana	43651405	BASF Corporation	OWN	1995/5263
164-1	835 Series	Terrestrial Dissip[ation Study with Dicamba Formulation in Nebraska	43651406	BASF Corporation	OWN	
164-1	835 Series	Terrestrial Dissip[ation Study with Dicamba Formulation in Indiana	43651407	BASF Corporation	OWN	1995/5257
164-1	835 Series	Terrestrial Dissipation Study with Dicamba Formulation in North Carolina	43651408	BASF Corporation	OWN	1995/5261
164-1	835 Series	Terrestrial Dissipation Study with Dicamba BAPMA salt Formulation	48718005	BASF Corporation	OWN	
165-1	860.1850	Confined Accumulation Studies of Dicamba on Rotational Crops: Final Report	43698601	BASF Corporation	OWN	1995/5262
171-4a	860.1300	Uptake, Translocation and Metabolism of Dicamba Herbicide in Cotton...	00147898	BASF Corporation	OWN	
171-4a; 171-4k	860.1300; 860.1500	The Results of Tests on the Amount of Residue Remaining, Including a Description of the ...	00161859	BASF Corporation	OWN	
171-4a	860.1300	Metabolic Fate of Dicamba in Sugarcane Plants	00079747	BASF Corporation	OWN	1981/5192

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	Jeffrey H. Birk Regulatory Manager	3-23-12

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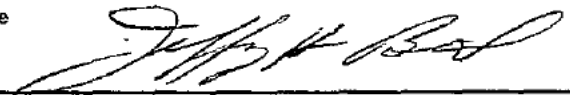
DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 13 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
171-4a	860.1300	Banvel Herbicide Residue from Preharvest Application	00145248	BASF Corporation	OWN	1981/5202
171-4a	860.1300	Foliar Absorption, Metabolism and Translocation of Dicamba by Soybeans	00102945	BASF Corporation	OWN	1982/5127
171-4a	860.1300	Metabolism of Dicamba in wheat and bluegrass	00036921	BASF Corporation	OWN	1966/5006
171-4b	860.1300	Metabolic Fate of the Herbicide Dicamba in a Lactating Cow	00077779	BASF Corporation	OWN	1980/5080
171-4b	860.1300	Metabolism of Dicamba in Lactating Goats: Laboratory Final Report	43245201	BASF Corporation	OWN	1994/5219
171-4b	860.1300	Dicamba: Metabolism in Laying Hens: Laboratory Final Report	43245202	BASF Corporation	OWN	1994/5218
171-4c	860.1340	Determination of Dicamba and 3,6 DCSA in Liver, Kidney, Sleletal Muscle, Tissue, and Milk	00066384 00079744	BASF Corporation	OWN	1979/5067
171-4c	860.1340	Confirmatory Method Trial of the Residue Method, AM-0691B-0593-2...	42883201	BASF Corporation	OWN	1992/5264
171-4c	860.1340	Determination of Dicamba 5-Hydroxy Dicamba Residues in Barley, Corn, Cotton...	43814002	BASF Corporation	OWN	1993/5261
171-4c	860.1340	Confirmatory Method Trial for the Residue Method, AM-0941-1094-0 "Determination	43814104	BASF Corporation	OWN	1995/5278

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 14 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
171-4c	860.1340	Determination of Dicamba and 5-Hydroxy Dicamba Residues in Barley, Corn, Cotton,	44394102	BASF Corporation	OWN	
171-4	860.1300	Confirmatory Method Trial of the Residue Method, AM-0938-0994-0, "Determination of	43461701	BASF Corporation	OWN	1994/5334
171-4b	860.1300	Confirmation of Dicamba and 3,6-Dichlorosalicylic Acid Residues Detected in Goat	43554205	BASF Corporation	OWN	1995/5215
171-4e	860.1380	Dicamba Residue Stability in Stored Frozen Sample	40547911	BASF Corporation	OWN	1985/5093
171-4e	860.1380	Stability of Dicamba and Dichlorosalicylic Acid in Stored Frozen Soil Samples	42883202	BASF Corporation	OWN	
171-4e	860.1380	Stability of Dicamba and 5-Hydroxy Dicamba in Stored Frozen Field Corn	43866601	BASF Corporation	OWN	1995/5362
171-4j	860.1480	Effect of Feeding Dicamba to Dairy Cattle (Residues in Liver, Kidney, Muscle, and Fat)	00066383 00079742	BASF Corporation	OWN	1979/5064
171-4j	860.1480	Dicamba: Residues in Cows & Other Subjects Compilation	00109535	BASF Corporation	OWN	
171-4j	860.1480	Dicamba Residues in Milk: Statistical Analysis	00116671	BASF Corporation	OWN	
171-4j	860.1480	Transfer of Dicamba Residues to Tissues and Eggs of Laying Hens	00146369	BASF Corporation	OWN	

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
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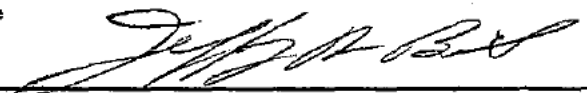
DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 15 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
171-4j	860.1480	Determination of Dicamba Residue in Laying Hen Tissues and Eggs after a 28 Day Feeding Study	00148127	BASF Corporation	OWN	1984/5078
171-4k	860.1500	Residue Project 69-6, Banvel, 2,4,5-T, 2,4-D – Grass	28173	BASF Corporation	OWN	1970/5011
171-4k	860.1500	Residue Project 75-8-D, Banvel Wheat	00055662	BASF Corporation	OWN	1975/5155
171-4k	860.1500	Residue Project 74-1-D, Banvel – Bladex-Corn	00015642	BASF Corporation	OWN	1975/5156
171-4k	860.1500	Residue Project 74-1-D, Banvel Corn	00015636	BASF Corporation	OWN	1975/5157
171-4k	860.1500	Residue Project 75-1-D, Banvel Corn Harvest Aid	00015637 00030697	BASF Corporation	OWN	1976/5104
171-4k	860.1500	Residue Project 75-1-D, Banvel Corn (No-Till)	00015641	BASF Corporation	OWN	1976/5108
171-4k	860.1500	Residue Project 75-1-D, Banvel 2S Corn	00025383	BASF Corporation	OWN	1976/5111
171-4k	860.1500	Residue Project 77-1-D Banvel – 2,4-D Corn	00015640	BASF Corporation	OWN	1978/5230
171-4k	860.1500	Residues in Corn from Use of Various Dicamba Salt Formulations	00088172	BASF Corporation	OWN	1981/5175
171-4k	860.1500	Banvel Herbicide (the Potassium Formulation): Supporting Residue Data	00132868	BASF Corporation	OWN	

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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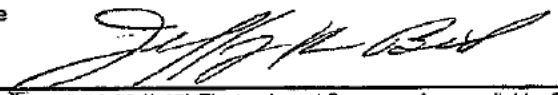
DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 16 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
171-4k	860.1500	Study--Dicamba Residue in Corn	00133567	BASF Corporation	OWN	
171-4k	860.1500	The Results of Tests on the Amount of Residue Remaining, Including a Description of the...	00138635	BASF Corporation	OWN	
171-4k	860.1500	Banvel Herbicide Residues in Vegetables, Peanuts and Alfalfa	00149626	BASF Corporation	OWN	
171-4k	860.1500	Amended Labeling Submission Addition of Grain Sorghum (MILO): Residue Data	00156874	BASF Corporation	OWN	
171-4k	860.1500	DMA Salt of Dicamba / IPA Salt of Glyphosate Tank Mixes:Analysis of Wheat and Barley Grain	00164097	BASF Corporation	OWN	
171-4k	860.1500	(Dicamba) - IPA Salt of Dicamba/ IPA Salt of Glyphosate Tank Mixes: Analysis of Barley, Oats,	00164098	BASF Corporation	OWN	
171-4a	860.1300	Uptake, Translocation and Metabolism of Dicamba Herbicide in Cotton after Fallow	40642801	BASF Corporation	OWN	1988/5471
171-4k	860.1500	Crop Residue Study with Dicamba Formulations on Grain Sorghum: Laboratory Final Report	43245203	BASF Corporation	OWN	1994/5220
171-4k	860.1500	Crop Residue Study with Dicamba Formulations on Asparagus: Laboratory Final Report	43245206	BASF Corporation	OWN	1994/5217
171-4k	860.1500	Crop Residue Study with Dicamba Formulations on Wheat (Forage & Hay): Final Report	43274501	BASF Corporation	OWN	1994/5238

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 17 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
171-4k	860.1500	Crop Residue Study with Dicamba Formulations on Grass Forage and Hay	43370701	BASF Corporation	OWN	1994/5295
171-4k	860.1500	Crop Residue Study with Dicamba Formulations on Asparagus: Final Report	43425803	BASF Corporation	OWN	1994/5314
171-4k	860.1500	Crop Residue Study with Dicamba on Cotton: Final Report	43814001	BASF Corporation	OWN	1995/5297
171-4k	860.1500	Crop Residue Study with Dicamba Formulations on Soybeans: Final Report: (alternate to Craven)	43814101	BASF Corporation	OWN	1995/5298
171-4	860.1340	Determination of Dicamba Dichlorosalicyclic Acid and 5-Hydroxy Dicamba Residues (alt to Craven)	43814103	BASF Corporation	OWN	1994/5343
171-4k	860.1500	Crop Residue Study with Dicamba Formulations on Sugar Cane: Final Report: (alt to Craven)	44089302	BASF Corporation	OWN	1996/5334
171-4k	860.1500	Crop Residue Study with Dicamba Formulations on Field Corn: Final Report: (alt to Craven data)	44089303	BASF Corporation	OWN	1996/5331
171-4k	860.1500	Crop Residue Study with Dicamba Formulations on Barley: Final Report: (alt Craven data)	44089304	BASF Corporation	OWN	1996/5314
171-4k	860.1500	Crop Residue Study with Dicamba Formulations on Wheat: Final Report: (alt to Craven data)	44089305	BASF Corporation	OWN	1996/5305
171-4k	860.1500	Crop Residue Study with Dicamba Formulation on Sorghum: Final Report: (alt to Craven data)	44089306	BASF Corporation	OWN	1996/5329

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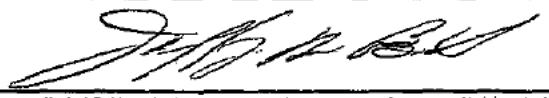	Jeffrey H. Birk Regulatory Manager	3-23-12

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DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 18 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
171-4k	860.1500	Crop Residue and Residue Decline Study with Dicamba Formulation on Soybean (alt to Craven)	44089307	BASF Corporation	OWN	1996/5312
171-4k	860.1500	Postemergence Banvel Formulations: Sorghum Residue Study	40547909	BASF Corporation	OWN	1983/5123
171-4l	860.1520	Dicamba Residue Levels in Sorghum Grain & Processing Fractions	40547910	BASF Corporation	OWN	1988/5455
171-4l	860.1520	Dicamba Residues in Corn Processing Fractions from a Pre-Harvest Application...	41187301	BASF Corporation	OWN	1989/5238
171-4l	860.1520	Dicamba Residues in Wheat Processing Fractions from a Pre-Harvest App of Banvel	42675901	BASF Corporation	OWN	1990/5174
171-4l	860.1520	Dicamba Residue Study on Sugar Cane and Sugar Cane Processed Fractions	43245204	BASF Corporation	OWN	1994/5233
171-4l	860.1520	Dicamba Residue Study on Sorghum Grain and Sorghum Processed Fractions	43245205	BASF Corporation	OWN	1994/5232
171-4l	860.1520	Dicamba Residue Study on Soybean Grain and Soybean Processed Fractions: (alt to Craven)	43814102	BASF Corporation	OWN	1995/5299
171-4a	860.1300	The Results of Tests on the Amount of Banvel Residue Remaining, Incl Desc of An Meth Used	00118473	BASF Corporation	OWN	
171-4j	860.1480	A Meat and Milk Magnitude of the Residue Study with Dicamba in Lactating Dairy Cows	44891303	BASF Corporation	OWN	
171-4k	860.1500	The Magnitude of Dicamba Residues in Wheat Forage and Hay	44891302	BASF Corporation	OWN	1999/5008

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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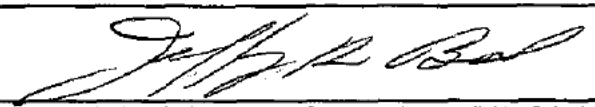
DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 19 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
171-4c	860.1340	Analysis of Barley, corn, Sorghum, Sugarcane, and Wheat for Dicamba and 5 Hydroxy	00162206	BASF Corporation	OWN	1986/5167
171-4c	860.1340	Validation of Sandoz Analytical Method No. AM-0691B-0297-4 "Determination of Dicamba	44891301	BASF Corporation	OWN	1998/5106
84-2	870.5100	In Vitro Microbiological Mutagenicity and Unscheduled DNA Sythesis Studies	00143001	BASF Corporation	OWN	1979/5078
84-2	870.5100	Micronucleus Cytogenetic Assay in Mice	43354334	BASF Corporation	OWN	1994/5292
71-1	850.2100	Acute Oral LD50--Mallard Duck: Banvel Herbicide	0073275 00028282	BASF Corporation	OWN	1979/5071
71-1	850.2100	Acute Oral LD50--Mallard Duck: Banvel Technical: Final Report	00025392 00159794	BASF Corporation	OWN	1977/5070
72-2	850.1010	Acute Toxicity of Banvel Technical to Water Flea Daphnia magna	00052126	BASF Corporation	OWN	1977/5068
61 series	830 Series	Sodium Dicambate Technical Product Identity and Composition	43320601	BASF Corporation	OWN	1994/5276
62 series	830 Series	Sodium Dicambate Technical Analysis and Certification of Product Ingredients	43320602	BASF Corporation	OWN	1994/5278
84-2	870 Series	Salmonella Plate Incorporation Mutagenicity Assay (Ames Test) with a Confirmatory Assay:	43310303	BASF Corporation	OWN	1994/5251
84-2	870 Series	L5178Y/TK+/- Mouse Lymphoma Mutagenesis Assay with a Confirmatory Assay	43310306	BASF Corporation	OWN	1994/5245

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 20 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
81-4	870.2400	Primary Eye Irritation Study in Albino Rabbits with Sodium Dicambate Technical	43599101	BASF Corporation	OWN	1995/5227
63-12	830.7000	pH of Dicamba Sodium Salt, Technical: Laboratory Final Report	43320608	BASF Corporation	OWN	1994/5256
Series 63	830.7050	Spectroscopic Data of Dicamba	47504709	BASF Corporation	OWN	1993/5000195
171-4j	860.1480	A Meat and Milk Magnitude of the Residue Study with Dicamba in Lactating Dairy Cows	44891303	BASF Corporation	OWN	1998/5106
171-4k	860.1500	The Magnitude of Dicamba Residues in Wheat Forage and Hay	44891302	BASF Corporation	OWN	1999/5008
171-4k	860.1500	Analysis of Wheat and Wheat Processed Fractions for Dicamba and 5-Hydroxy Dicamba	40663801	Sandoz	OWN	1986/5171
165-1	860.1850	Confined Accumulation Studies of Dicamba on Rotational Crops After Spring Application	41972001	Sandoz	OWN	1989/5231
63-3	830.6303	Physical State of Dicamba, Technical	43140302	Sandoz	OWN	1993/5252
63-2	830.6302	Color of Dicamba, Technical	43140301	Sandoz	OWN	1993/5253
63-7	830.7300	Density of Dicamba, Technical	43140305	Sandoz	OWN	1993/5254

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

Form Approved OMB No. 2070-0060

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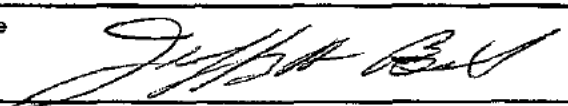
DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 21 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
63-5	830.7200	Melting Point of Dicamba, Technical	43140304	Sandoz	OWN	1993/5255
63-12	830.7000	pH of Dicamba, Technical	43140310	Sandoz	OWN	1993/5256
63-8	830.7840	Solubility of Technical Dicamba in Solvents	43140306	Sandoz	OWN	1993/5265
63-4	830.6304	Determination of Odor for Dicamba, Technical	43140303	Sandoz	OWN	1993/5270
63-14	830.6314	Oxidizing or Reducing Action of Dicamba, Tech	43140311	Sandoz	OWN	1993/5278
63-16	830.6316	Explodability of Dicamba, Technical	43140312	Sandoz	OWN	1993/5279
830.7950	63-9	Vapor Pressure of Dicamba Using the Thermal	43140307	Sandoz	OWN	1994/5202
63-20	830.6320	Corrosivity of Dicamba, Technical	43140314	Sandoz	OWN	1994/5203
63-17	830.6317	Stability of Technical Dicamba	43231803	Sandoz	OWN	1994/5216
Series 61 /62	830.1550	Dicamba Technical Product Identity and	43231801	Sandoz	OWN	1994/5223
Series 61 /62	830.1750	Dicamba Technical Analysis and Certification of Product Ingredients	43231802	Sandoz	OWN	1994/5225
63-2	830.6302	Color of Dicamba Sodium Salt, Technical	43320603	Sandoz	OWN	1994/5252
63-3	830.6303	Physical State of Dicamba Sodium Salt,	43320604	Sandoz	OWN	1994/5253

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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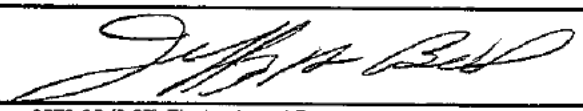
DATA MATRIX

Date 3-23-12	**EPA Reg No./File Symbol** 7969-132	Page 22 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
63-7	830.7300	The Density of Dicamba Sodium Salt, Technical	43320607	Sandoz	OWN	1994/5254
63-5	830.7200	Melting Point of Dicamba Sodium Salt, Technical	43320606	Sandoz	OWN	1994/5255
63-4	830.6304	Determination of the Odor of Sodium Dicambate	43320605	Sandoz	OWN	1994/5280
164-1	835 Series	Terrestrial Dissipation Study with Dicamba	43361506	Sandoz	OWN	1994/5305
164-1	835 Series	Terrestrial Dissipation Study with Dicamba	43361507	Sandoz	OWN	1994/5304
63-20	830.6320	Determination of Corrosion Characteristics of Banvel Herbicide	43554201	Sandoz	OWN	1995/5217
63-17	830.6317	Storage Stability of Banvel Herbicide	43758507	Sandoz	OWN	1995/5300
63-17	830.6317	Storage Stability of Dicamba Acid	43758506	Sandoz	OWN	1995/5302
171-4k	860.1500	The Magnitude of Dicamba Residues in Cotton Gin Byproducts	45196801	BASF Corporation	OWN	2000/5151
None	None	Dicamba: Review of Recent Pharmacokinetic Studies and Discussion of Dose Level Selection	46022301	BASF Corporation	OWN	2003/5000325

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
None	None	^{14}C-Dicamba- Study on Plasmakinetics in Rats	46022302	BASF Corporation	OWN	2002/5004466
None	None	^{14}C-Dicamba- Study on Effect of Probenecid on	46022303	BASF Corporation	OWN	2003/1005488
	Special	Determination of Transferable Turf Residues with Dicamba	44959001	BASF Corporation	OWN	1999/5000179

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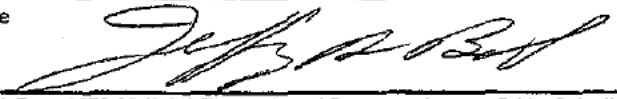	Jeffrey H. Birk Regulatory Manager	3-23-12

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Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
61 - series	830 Series	Dicamba Technical Product Identity and Composition: Lab Project Number: 050594-1	43231801	BASF Corporation	OWN	
62 series	830 Series	Dicamba Tech Analysis and Certification of Product Ingredients: Lab Proj Number: 050594-2.	43231802	BASF Corporation	OWN	
61-2; 62-3	830 Series	Analysis for 2,3,7,8-TCCD or its Precursors in Samples from the Dicamba Process	40874902	BASF Corporation	OWN	1980/5084
61-2; 62-3	830 Series	Analysis of Dichlorodibenzenzo-p-dioxin in Technical Dicamba, Banvel Herbicide	40874903	BASF Corporation	OWN	
61-2	830 Series	Theoretical Discussion of Development of HDD/HDF Impurities in Dicamba Manufacture	40874901	BASF Corporation	OWN	
62-series	830 Series	Analysis of Chlorinated Cogeners of 2,3,7,8-TCDD/TCDF in Technical Dicamba	41824001	BASF Corporation	OWN	1991/5260
	830.1700	Preliminary Analysis	47373601	BASF Corporation	OWN	
63-2	830.6302	Color of Banvel Herbicide, Anhydrous, Technical	43643806	BASF Corporation	OWN	1995/5237
63-3	830.6303	Physical State of Banvel Herbicide, Anhydrous, Technical	43643807	BASF Corporation	OWN	1995/5238
63-4	830.6304	Determination of Odor of Anhydrous Dimethylamine salt of Dicamba	43758503	BASF Corporation	OWN	1995/5268
63-5	830.7200	Melting Point of Banvel Herbicide, Anhydrous, Technical	43643808	BASF Corporation	OWN	1995/5240

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DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 2 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
63-7	830.7300	Tap Density of Banvel Herbicide, Anhydrous Technical	43643809	BASF Corporation	OWN	1995/5239
63-10	830.7370	Dissociation Constant of Dicamba: Final Report	43140308	BASF Corporation	OWN	1993/5249
63-10	830.7370	Dissociation Rate of Dicamba Salts	43288001	BASF Corporation	OWN	1994/5238
63-11	830.7570	Determination of n-Octanol/Water Partition Coefficient for 3,6-Dichlorosalicyclic Acid (DCSA)	41966601	BASF Corporation	OWN	1989/5229
63-12	830.7000	pH of Banvel Herbicide, Anhydrous, Technical	43643810	BASF Corporation	OWN	1995/5241
63-13		Stability of Dicamba Tech	43231803	BASF Corporation	OWN	
71-1	850.2100	Amendment to Report Acute Oral LD50-Mallard Duck Banvel Technical:Final Report	00159794	BASF Corporation	OWN	1977/5070
71-1	850.2100	(dicamba)-3 Lb./Gal. Isopropylamine Salt of Dicamba: An Acute oral Tox Study w/ Bobwhite	00164105	BASF Corporation	OWN	1986/5144
71-1	850.2100	Technical Dicamba: An Acute Oral Toxicity Study with the Mallard	42774106	BASF Corporation	OWN	1993/5245
71-1	850.2100	Technical Dicamba: An Acute Oral Toxicity with the Northern Bobwhite: Report Amendment	42774105 42918001	BASF Corporation	OWN	1993/5238
71-1	850.2100	Technical Dicamba Acute Oral Toxicity Study with passerine species (zebra finch)	48718013	BASF Corporation	OWN	2011/7002392
71-2	850.2200	Eight-Day Dietary LC50 Bobwhite	00034693	BASF Corporation	OWN	1974/5132

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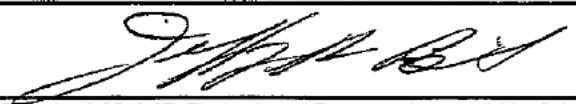	Jeffrey H. Birk Regulatory Manager	3-23-12

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DATA MATRIX

Date 3-23-12	**EPA Reg No./File Symbol** 7969-132	Page 3 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
71-2	850.2200	Eight Day Dietary LC50 – Mallard – Banvel	0022527	BASF Corporation	OWN	1974/5133
71-2	850.2200	Eight Day Dietary LC50 – Mallard –	0025317	BASF Corporation	OWN	1974/5168
71-2	850.2200	Eight-Day Dietary LC50 Bobwhite	0025318	BASF Corporation	OWN	1974/5169
71-2	850.2200	Eight Day Dietary LC50 – Mallard – (Banvel Sodium Salt)	00025327 00030102	BASF Corporation	OWN	1975/5143
71-2	850.2200	Eight-Day Dietary LC50 Bobwhite – (Banvel Sodium Salt)	00025328 00030102	BASF Corporation	OWN	1975/5144
71-2	850.2200	Eight-Day Dietary LC50 Mallard Ducks, Banvel	00037628	BASF Corporation	OWN	1977/5071
71-2	850.2200	Diglycolamine Salt of Dicamba: A Dietary LC 50 Study – Mallard	00162072	BASF Corporation	OWN	1986/5152
71-2	850.2200	Eight-Day Dietary LC50 Bobwhite Quail, Banvel Technical	00025391	BASF Corporation	OWN	1977/5072
71-2	850.2200	Diglycolamine Salt of Dicamba: A Dietary LC 50 Study – Bobwhite	00162071	BASF Corporation	OWN	1986/5163
71-2	850.2200	BAPMA Salt of Dicamba: A Dietary LC 50 Study – Bobwhite	48718006	BASF Corporation	OWN	2011/1009248
71-4	850.2300	Technical Dicamba: A Reproduction Study with the Northern Bobwhite	43814004	BASF Corporation	OWN	1994/5320

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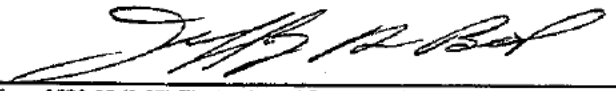	Jeffrey H. Birk Regulatory Manager	3-23-12

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Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
71-4	850.2300	Technical Dicamba: A Reproduction Study with the Mallard	43814003	BASF Corporation	OWN	1994/5319
72-1	850.1075	The Acute Toxicity of Five Velsicol Pesticides to the Bluegill	22530	BASF Corporation	OWN	1971/5013
72-1	850.1075	The Acute Toxicity of Banvel XP to the Rainbow Trout	36915	BASF Corporation	OWN	1974/5150
72-1	850.1075	The Acute Toxicity of Banvel 2S to the Rainbow Trout	29623	BASF Corporation	OWN	1974/5153
72-1	850.1075	The Acute Toxicity of Banvel 2S to the Bluegill	225393	BASF Corporation	OWN	1974/5154
72-1	850.1075	The Acute Toxicity of Banvel Technical to the Rainbow Trout	00041272	BASF Corporation	OWN	1977/5069
72-1	850.1075	The Acute Toxicity of Banvel Technical to the Bluegill Sunfish	00034703	BASF Corporation	OWN	1977/5075
72-1	850.1075	Acute Toxicity of CST/Stumpbuster to Bluegill Sunfish	46183	BASF Corporation	OWN	1980/5118
72-1	850.1075	Acute Toxicity of CST/Stumpbuster to Rainbow Trout	46184	BASF Corporation	OWN	1980/5119
72-1	850.1075	Acute Toxicity of CN-10-6471 (Banvel Herbicide) to Bluegill Sunfish	00153150	BASF Corporation	OWN	1985/5103
72-1	850.1075	Acute Toxicity of CN-10-6471 (Banvel Herbicide) to Rainbow Trout	00153151	BASF Corporation	OWN	1985/5104

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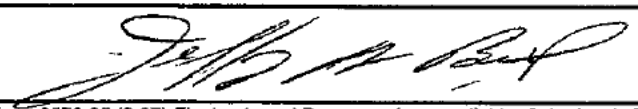	Jeffrey H. Birk Regulatory Manager	3-23-12

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Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 5 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
72-1	850.1075	Acute Toxicity of CN-11-4962 (Diglycoamine salt) to Bluegill Sunfish	00162067	BASF Corporation	OWN	1986/5147
72-1	850.1075	Acute Toxicity of CN-11-4962 (Diglycoamine salt) to Rainbow Trout	00162068	BASF Corporation	OWN	1986/5150
72-1	850.1075	Acute Toxicity of Banvel Herbicide to Rainbow Trout	00100611	BASF Corporation	OWN	1981/5179
72-2	850.1010	Acute Toxicity of Banvel 2S to the Water Flea, Daphnia magna	85935	BASF Corporation	OWN	1977/5131
72-2	850.1010	Acute Toxicity of Banvel Herbicide to Daphnia Magna	00073276	BASF Corporation	OWN	1979/5068
72-2	850.1010	Acute Toxicity of CN-10-6471 (Banvel Herbicide) to Daphnia magna	00153152	BASF Corporation	OWN	1985/5098
72-2	850.1010	Acute Toxicity of CN-11-4962 (Diglycoamine salt) to Daphnia magna	00162069	BASF Corporation	OWN	1986/5148
72-3	850.1035	Acute Toxicity of Banvel Technical to the Grass Shrimp	00034702	BASF Corporation	OWN	1977/5076
72-3	850.1035	Acute Toxicity of Banvel Technical to the Fiddler Crab	00034704	BASF Corporation	OWN	1977/5077
72-3a	850.1075	Acute Toxicity BAPMA salt of dicamba to Sheepshead Minnow	48718008	BASF Corporation	OWN	2011/1140831
72-3a	850.1075	Acute Toxicity of Banvel technical to the Sheepshead Minnow	00025390	BASF Corporation	OWN	1977/5078

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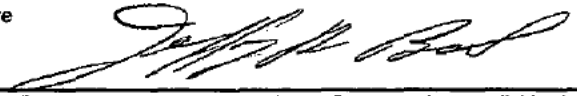	Jeffrey H. Birk Regulatory Manager	3-23-12

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Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
72-4	850.1300	Chronic Toxicity of BAPMA salt of dicamba to Daphnia Magna	48718007	BASF Corporation	OWN	2011/1074513
72-4	850.1350	Chronic estuarine/marine invertebrate (mysid) with dicamba technical	48718012	BASF Corporation	OWN	2012/70000027
72-4	850.1400	Chronic freshwater fish ELS with dicamba acid	48718010	BASF Corporation	OWN	2011/1142337
72-5	850.1500	Chronic estuarine/marine fish ELS with dicamba acid	48718011	BASF Corporation	OWN	2011/7006569
81-1	870.1100	Acute oral toxicity / rat	00023692 00078444	BASF Corporation	OWN	1966/5004
81-2 81-4 81-5	870.1200 870.2400 870.2500	Cute Toxicity Studies in Rats and Rabbits, Banvel Technical	25372	BASF Corporation	OWN	1974/5140
81-3	870.1300	The acute Toxicity of inhaled Banvel 480 (Banvel Herbicide)in the Albino Rat	00143011	BASF Corporation	OWN	1984/5068
81-3	870.1300	Four-Hour Acute Aerosol Inhalation Toxicity Study in Rat of CN-11-4962	00162065	BASF Corporation	OWN	1985/5091
81-3	870.1300	4-hour Acute Inhalation Toxicity in Rats	47504703	BASF Corporation	OWN	2001/5003909

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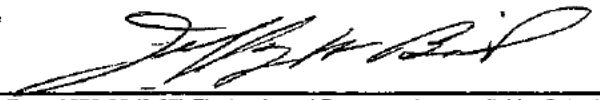	Jeffrey H. Birk Regulatory Manager	3-23-12

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DATA MATRIX

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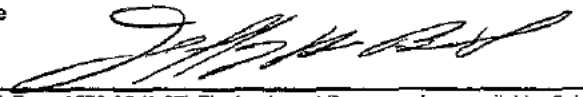
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
81-4	870.2400	Primary Eye Irritation Study in Albino Rabbits with Technical Dicamba Lot 52625110	00144232	BASF Corporation	OWN	1984/5051
81-6	870.2600	Skin Sensitization CN-11-4962 (Diglycoamine salt)	00162064	BASF Corporation	OWN	1985/5112
81-6	870.2600	Contact hypersensitivity to Dicamba Tech	47504702	BASF Corporation	OWN	1991/12112
81-8	870.6200	Acute Neurotoxicity Study of Technical Dicamba by Gavage in Rats	42774104	BASF Corporation	OWN	1993/5248
82-1	870.3100	13-Week Dietary Toxicity Study in Rats with Dicamba	00128093	BASF Corporation	OWN	1980/5090
82-1	870.3100	13-Week Feeding study in rats (including 4-week recovery)	44623101	BASF Corporation	OWN	1997/11528
82-2	870.3200	21-Day Dermal Toxicity Study in Rabbits with Banvel Herbicide	40547901	BASF Corporation	OWN	1986/5154
82-2	870.3200	28-Day Dermal Toxicity - Rats with Dicamba Tech	45814501	BASF Corporation	OWN	2002/5004466
82-7	870.6200	Subchronic Neurotoxicity Study of Dietary Technical Dicamba in Rats: Final Report	43245210	BASF Corporation	OWN	1994/5200
83-1	870.4100	Technical Reference Standard Dicamba. One-Year Dietary Toxicity Study in Dogs	40321102	BASF Corporation	OWN	1986/5183
83-2	870-4200	Lifetime Dietary Toxicity and Oncogenicity Study in Rats (24 months)	00146150	BASF Corporation	OWN	1984/5063

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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DATA MATRIX

Date 3-23-12	**EPA Reg No./File Symbol** 7969-132	Page 8 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
83-2	870.4200	Dicamba: Potential Tumorigenic Effects in Prolonged Dietary Administration to Mice	40872401	BASF Corporation	OWN	1988/5480
83-3	870.3700	Teratology Study in Albino Rats with Technical Dicamba	00084024	BASF Corporation	OWN	1981/5196
83-3	870.3700	Developmental Toxicity Study of Tech Dicamba Administered Orally via Capsule to New Zealand	42429401	BASF Corporation	OWN	1992/5230
83-4	870.3800	A Study of the Reproductive Function of Two-Generations in the Rat	43137101	BASF Corporation	OWN	1993/5280
84-2	870 Series	Salmonella Plate Incorporation Mutagenicity Assay Ames Test with a Confirmatory Assay:	43310301	BASF Corporation	OWN	1994/5250
84-2	870 Series	Micronucleus Cytogenetic Assay in Mice	43354332	BASF Corporation	OWN	1994/5291
84-2	870 Series	Dicamba: Toxicology Summary and Risk Assessment with Expanded Discussion	44609802	BASF Corporation	OWN	1997/5442
84-2	870.5300	Chromosome Aberrations in Chinese Hamster Ovary (CHO) Cells	40321101	BASF Corporation	OWN	1986/5184
84-2	870 Series	L5178Y/TK+/-Mouse Lymphoma Mutagenesis Assay with a Confirmatory Assay	43310304	BASF Corporation	OWN	1994/5247
84-2	870.5100	Ames Assay	48718001	BASF Corporation	OWN	2011/1277500
84-2	870.5300	Chromosome Aberrations in Chinese Hamster Ovary (CHO) Cells	48718002	BASF Corporation	OWN	2012/1016696

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 9 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
84-2	870.5375	Mammalian cell chromosome abberation	48718003	BASF Corporation	OWN	2012/1015454
84-2	870.5395	In-vivo mouse micronucleus	48718004	BASF Corporation	OWN	2012/1022028
85-1	870.7485	The Distribution and Excretion of Banvel D As Determined by Radiotracer Technique -Rats.	28261	BASF Corporation	OWN	1963/5003
85-1	870.7485	Dicamba: Physiological Dissociation of Amine Salts in Rats	43288002	BASF Corporation	OWN	1994/5240
85-1	870.7485	Report: (carbon14)-Dicamba Study of the Plasma Kinetics in Rats	44609801	BASF Corporation	OWN	1994/5238
122-1; 123-1	850.4250	Dicamba Technical Determination of Effects on Seed Germination, Seedling Emergence ...	42846301	BASF Corporation	OWN	1993/5257
123-1	850.4225	BAPMA salt of dicamba, Tier II seedling emergence	48718014	BASF Corporation	OWN	2011/7006351
123-1	850.4250	BAPMA salt of dicamba, Tier II vegetative vigor	48718015	BASF Corporation	OWN	2011/7006488
122-2; 123-2	850.4400	Dicamba Technical: Toxicity to the Freshwater Green Algae, Selenastrum Capricornutum	42774107	BASF Corporation	OWN	1993/5221
122-2; 123-2	850.4400	Dicamba Technical: Toxicity to the Freshwater Diatom, Navicula Pelliculosa	42774108	BASF Corporation	OWN	1993/5231

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DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 10 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
122-2; 123-2	850.5400	Dicamba Technical: Toxicity to the Freshwater Alga, Anabaena flos-aquae:	42774109	BASF Corporation	OWN	1993/5246
122-2; 123-2	850.5400	Dicamba Technical: Toxicity to the Marine Diatom, Skeletenoma costatum: Final Report	42774110	BASF Corporation	OWN	1993/5239
122-2; 123-2	850.4400	BAPMA salt of dicamba toxicity to the Freshwater Green Algae, Selenastrum Capricornutum	48718009	BASF Corporation	OWN	2011/1079991
122-2; 123-2	850.4400	Dicamba Technical: Toxicity to the Duckweed, Lemna Gibba: Final Report	42774111	BASF Corporation	OWN	1993/5233
161-1	835.2120	Hydrolysis of [Carbon 14] -Dicamba	40335501	BASF Corporation	OWN	1981/5205
161-2	835.2240	Dicamba: Photodegradation Study in pH 7 Aqueous Solution: Final Report	42774102	BASF Corporation	OWN	1993/5237
161-3	835.2410	Dicamba: Photodegradation Study on Soil	42774103	BASF Corporation	OWN	1993/5244
162-1	835.4100	Aerobic Soil Metabolism of Dicamba Acid: Laboratory Final Report	43245207	BASF Corporation	OWN	1994/5222
162-1	835.4100	Aerobic Soil Metabolism of Dimethylamine, Diglycolamine, and Isopropylamine: Final Report	43866602	BASF Corporation	OWN	1995/5325
162-3	835.4400	Anaerobic Aquatic Metabolism of (Carbon 14)-Dicamba	43245208	BASF Corporation	OWN	1994/5221

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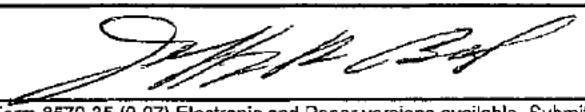	Jeffrey H. Birk Regulatory Manager	3-23-12

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DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 11 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
162-3	835.4400	Anaerobic Aquatic Metabolism of Carbon-14)-Dimethylamine HCL, (Carbon-14)-Isopropylamine HCL, and (Carbon-14)-Diglycolamine HCL	44216701	BASF Corporation	OWN	1996/5391
162-4	835.4300	Results of an Aerobic Aquatic Metabolism of Dicamba Acid Study Conducted in Switzerland	43245209	BASF Corporation	OWN	1994/5234
162-4	835.4300	Aerobic Aquatic Metabolism of 14C Dicamba	43758509	BASF Corporation	OWN	1995/5270
163-1	835.1240	Soil Thin-Layer Chromatography of Dicamba and 3,6-Dichlorosalicylic Acid on Five...	40547907	BASF Corporation	OWN	1986/5185
163-1	835.1240	Soil Adsorption and Desorption of Dicamba, Unaged, by the Batch Equilibrium Method	42774101	BASF Corporation	OWN	1993/5247
163-1	835.1240	Soil Adsorption and Desorption of the Major Soil Metabolite of Dicamba, 3,6-Dichlorosalicylic Acid:	43095301	BASF Corporation	OWN	1993/5290
163-2	835.1410	Addendum to Report No. 480060-6 on Volatility of Three Dicamba Formulations	41966602	BASF Corporation	OWN	1988/5476
164-1	835.1240	Terrestrial Dissipation of Dicamba in Turf Soil in California FEP 130/90/1, Trial ID 1300160A	42754101	BASF Corporation	OWN	1991/5287
164-1	835.1240	Terrestrial Dissipation of Dicamba in Turf Soil in Indiana FEP 130/90/1, Trial ID 1300115A:	42754102	BASF Corporation	OWN	1991/5302

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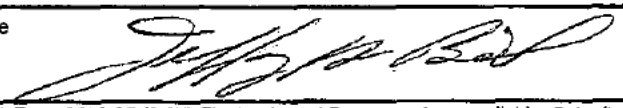	Jeffrey H. Birk Regulatory Manager	3-23-12

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DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 12 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	Product: Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
164-1	835 Series	Summation of Dicamba Dissipation and Leaching Results from Studies Conducted in Germany	42754103	BASF Corporation	OWN	
164-1	835 Series	Terrestrial Dissip[ation Study with Dicamba Formulation in Louisiana	43651405	BASF Corporation	OWN	1995/5263
164-1	835 Series	Terrestrial Dissip[ation Study with Dicamba Formulation in Nebraska	43651406	BASF Corporation	OWN	
164-1	835 Series	Terrestrial Dissip[ation Study with Dicamba Formulation in Indiana	43651407	BASF Corporation	OWN	1995/5257
164-1	835 Series	Terrestrial Dissipation Study with Dicamba Formulation in North Carolina	43651408	BASF Corporation	OWN	1995/5261
164-1	835 Series	Terrestrial Dissipation Study with Dicamba BAPMA salt Formulation	48718005	BASF Corporation	OWN	
165-1	860.1850	Confined Accumulation Studies of Dicamba on Rotational Crops: Final Report	43698601	BASF Corporation	OWN	1995/5262
171-4a	860.1300	Uptake, Translocation and Metabolism of Dicamba Herbicide in Cotton...	00147898	BASF Corporation	OWN	
171-4a; 171-4k	860.1300; 860.1500	The Results of Tests on the Amount of Residue Remaining, Including a Description of the ...	00161859	BASF Corporation	OWN	
171-4a	860.1300	Metabolic Fate of Dicamba in Sugarcane Plants	00079747	BASF Corporation	OWN	1981/5192

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

Form Approved OMB No. 2070-0060

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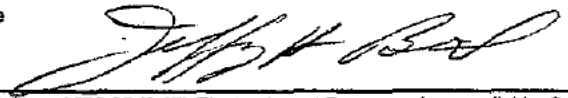
DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 13 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
171-4a	860.1300	Banvel Herbicide Residue from Preharvest Application	00145248	BASF Corporation	OWN	1981/5202
171-4a	860.1300	Foliar Absorption, Metabolism and Translocation of Dicamba by Soybeans	00102945	BASF Corporation	OWN	1982/5127
171-4a	860.1300	Metabolism of Dicamba in wheat and bluegrass	00036921	BASF Corporation	OWN	1966/5006
171-4b	860.1300	Metabolic Fate of the Herbicide Dicamba in a Lactating Cow	00077779	BASF Corporation	OWN	1980/5080
171-4b	860.1300	Metabolism of Dicamba in Lactating Goats: Laboratory Final Report	43245201	BASF Corporation	OWN	1994/5219
171-4b	860.1300	Dicamba: Metabolism in Laying Hens: Laboratory Final Report	43245202	BASF Corporation	OWN	1994/5218
171-4c	860.1340	Determination of Dicamba and 3,6 DCSA in Liver, Kidney, Sleletal Muscle, Tissue, and Milk	00066384 00079744	BASF Corporation	OWN	1979/5067
171-4c	860.1340	Confirmatory Method Trial of the Residue Method, AM-0691B-0593-2...	42883201	BASF Corporation	OWN	1992/5264
171-4c	860.1340	Determination of Dicamba 5-Hydroxy Dicamba Residues in Barley, Corn, Cotton...	43814002	BASF Corporation	OWN	1993/5261
171-4c	860.1340	Confirmatory Method Trial for the Residue Method, AM-0941-1094-0 "Determination	43814104	BASF Corporation	OWN	1995/5278

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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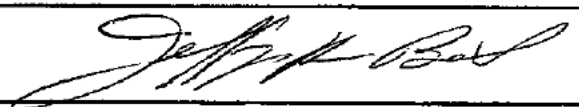
DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 14 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
171-4c	860.1340	Determination of Dicamba and 5-Hydroxy Dicamba Residues in Barley, Corn, Cotton,	44394102	BASF Corporation	OWN	
171-4	860.1300	Confirmatory Method Trial of the Residue Method, AM-0938-0994-0, "Determination of	43461701	BASF Corporation	OWN	1994/5334
171-4b	860.1300	Confirmation of Dicamba and 3,6-Dichlorosalicylic Acid Residues Detected in Goat	43554205	BASF Corporation	OWN	1995/5215
171-4e	860.1380	Dicamba Residue Stability in Stored Frozen Sample	40547911	BASF Corporation	OWN	1985/5093
171-4e	860.1380	Stability of Dicamba and Dichlorosalicylic Acid in Stored Frozen Soil Samples	42883202	BASF Corporation	OWN	
171-4e	860.1380	Stability of Dicamba and 5-Hydroxy Dicamba in Stored Frozen Field Corn	43866601	BASF Corporation	OWN	1995/5362
171-4j	860.1480	Effect of Feeding Dicamba to Dairy Cattle (Residues in Liver, Kidney, Muscle, and Fat)	00066383 00079742	BASF Corporation	OWN	1979/5064
171-4j	860.1480	Dicamba: Residues in Cows & Other Subjects Compilation	00109535	BASF Corporation	OWN	
171-4j	860.1480	Dicamba Residues in Milk: Statistical Analysis	00116671	BASF Corporation	OWN	
171-4j	860.1480	Transfer of Dicamba Residues to Tissues and Eggs of Laying Hens	00146369	BASF Corporation	OWN	

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 15 of 23
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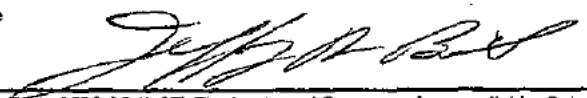
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
171-4j	860.1480	Determination of Dicamba Residue in Laying Hen Tissues and Eggs after a 28 Day Feeding Study	00148127	BASF Corporation	OWN	1984/5078
171-4k	860.1500	Residue Project 69-6, Banvel, 2,4,5-T, 2,4-D – Grass	28173	BASF Corporation	OWN	1970/5011
171-4k	860.1500	Residue Project 75-8-D, Banvel Wheat	00055662	BASF Corporation	OWN	1975/5155
171-4k	860.1500	Residue Project 74-1-D, Banvel – Bladex-Corn	00015642	BASF Corporation	OWN	1975/5156
171-4k	860.1500	Residue Project 74-1-D, Banvel Corn	00015636	BASF Corporation	OWN	1975/5157
171-4k	860.1500	Residue Project 75-1-D, Banvel Corn Harvest Aid	00015637 00030697	BASF Corporation	OWN	1976/5104
171-4k	860.1500	Residue Project 75-1-D, Banvel Corn (No-Till)	00015641	BASF Corporation	OWN	1976/5108
171-4k	860.1500	Residue Project 75-1-D, Banvel 2S Corn	00025383	BASF Corporation	OWN	1976/5111
171-4k	860.1500	Residue Project 77-1-D Banvel – 2,4-D Corn	00015640	BASF Corporation	OWN	1978/5230
171-4k	860.1500	Residues in Corn from Use of Various Dicamba Salt Formulations	00088172	BASF Corporation	OWN	1981/5175
171-4k	860.1500	Banvel Herbicide (the Potassium Formulation): Supporting Residue Data	00132868	BASF Corporation	OWN	

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 16 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
171-4k	860.1500	Study--Dicamba Residue in Corn	00133567	BASF Corporation	OWN	
171-4k	860.1500	The Results of Tests on the Amount of Residue Remaining, Including a Description of the...	00138635	BASF Corporation	OWN	
171-4k	860.1500	Banvel Herbicide Residues in Vegetables, Peanuts and Alfalfa	00149626	BASF Corporation	OWN	
171-4k	860.1500	Amended Labeling Submission Addition of Grain Sorghum (MILO): Residue Data	00156874	BASF Corporation	OWN	
171-4k	860.1500	DMA Salt of Dicamba / IPA Salt of Glyphosate Tank Mixes:Analysis of Wheat and Barley Grain	00164097	BASF Corporation	OWN	
171-4k	860.1500	(Dicamba) - IPA Salt of Dicamba/ IPA Salt of Glyphosate Tank Mixes: Analysis of Barley, Oats,	00164098	BASF Corporation	OWN	
171-4a	860.1300	Uptake, Translocation and Metabolism of Dicamba Herbicide in Cotton after Fallow	40642801	BASF Corporation	OWN	1988/5471
171-4k	860.1500	Crop Residue Study with Dicamba Formulations on Grain Sorghum: Laboratory Final Report	43245203	BASF Corporation	OWN	1994/5220
171-4k	860.1500	Crop Residue Study with Dicamba Formulations on Asparagus: Laboratory Final Report	43245206	BASF Corporation	OWN	1994/5217
171-4k	860.1500	Crop Residue Study with Dicamba Formulations on Wheat (Forage & Hay): Final Report	43274501	BASF Corporation	OWN	1994/5236

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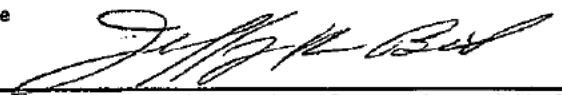	Jeffrey H. Birk Regulatory Manager	3-23-12

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DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 17 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
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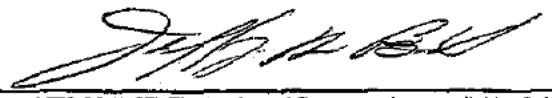
Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
171-4k	860.1500	Crop Residue Study with Dicamba Formulations on Grass Forage and Hay	43370701	BASF Corporation	OWN	1994/5295
171-4k	860.1500	Crop Residue Study with Dicamba Formulations on Asparagus: Final Report	43425803	BASF Corporation	OWN	1994/5314
171-4k	860.1500	Crop Residue Study with Dicamba on Cotton: Final Report	43814001	BASF Corporation	OWN	1995/5297
171-4k	860.1500	Crop Residue Study with Dicamba Formulations on Soybeans: Final Report: (alternate to Craven)	43814101	BASF Corporation	OWN	1995/5298
171-4	860.1340	Determination of Dicamba Dichlorosalicyclic Acid and 5-Hydroxy Dicamba Residues (alt to Craven)	43814103	BASF Corporation	OWN	1994/5343
171-4k	860.1500	Crop Residue Study with Dicamba Formulations on Sugar Cane: Final Report: (alt to Craven)	44089302	BASF Corporation	OWN	1996/5334
171-4k	860.1500	Crop Residue Study with Dicamba Formulations on Field Corn: Final Report: (alt to Craven data)	44089303	BASF Corporation	OWN	1996/5331
171-4k	860.1500	Crop Residue Study with Dicamba Formulations on Barley: Final Report: (alt Craven data)	44089304	BASF Corporation	OWN	1996/5314
171-4k	860.1500	Crop Residue Study with Dicamba Formulations on Wheat: Final Report: (alt to Craven data)	44089305	BASF Corporation	OWN	1996/5305
171-4k	860.1500	Crop Residue Study with Dicamba Formulation on Sorghum: Final Report: (alt to Craven data)	44089306	BASF Corporation	OWN	1996/5329

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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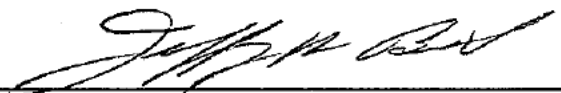
DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 18 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
171-4k	860.1500	Crop Residue and Residue Decline Study with Dicamba Formulation on Soybean (alt to Craven)	44089307	BASF Corporation	OWN	1996/5312
171-4k	860.1500	Postemergence Banvel Formulations: Sorghum Residue Study	40547909	BASF Corporation	OWN	1983/5123
171-4l	860.1520	Dicamba Residue Levels in Sorghum Grain & Processing Fractions	40547910	BASF Corporation	OWN	1988/5455
171-4l	860.1520	Dicamba Residues in Corn Processing Fractions from a Pre-Harvest Application...	41187301	BASF Corporation	OWN	1989/5238
171-4l	860.1520	Dicamba Residues in Wheat Processing Fractions from a Pre-Harvest App of Banvel	42675901	BASF Corporation	OWN	1990/5174
171-4l	860.1520	Dicamba Residue Study on Sugar Cane and Sugar Cane Processed Fractions	43245204	BASF Corporation	OWN	1994/5233
171-4l	860.1520	Dicamba Residue Study on Sorghum Grain and Sorghum Processed Fractions	43245205	BASF Corporation	OWN	1994/5232
171-4l	860.1520	Dicamba Residue Study on Soybean Grain and Soybean Processed Fractions: (alt to Craven)	43814102	BASF Corporation	OWN	1995/5299
171-4a	860.1300	The Results of Tests on the Amount of Banvel Residue Remaining, Incl Desc of An Meth Used	00118473	BASF Corporation	OWN	
171-4j	860.1480	A Meat and Milk Magnitude of the Residue Study with Dicamba in Lactating Dairy Cows	44891303	BASF Corporation	OWN	
171-4k	860.1500	The Magnitude of Dicamba Residues in Wheat Forage and Hay	44891302	BASF Corporation	OWN	1999/5008

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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DATA MATRIX

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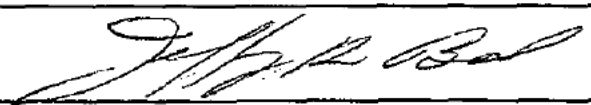
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
171-4c	860.1340	Analysis of Barley, corn, Sorghum, Sugarcane, and Wheat for Dicamba and 5 Hydroxy	00162206	BASF Corporation	OWN	1986/5167
171-4c	860.1340	Validation of Sandoz Analytical Method No. AM-0691B-0297-4 "Determination of Dicamba	44891301	BASF Corporation	OWN	1998/5106
84-2	870.5100	In Vitro Microbiological Mutagenicity and Unscheduled DNA Sythesis Studies	00143001	BASF Corporation	OWN	1979/5078
84-2	870.5100	Micronucleus Cytogenetic Assay in Mice	43354334	BASF Corporation	OWN	1994/5292
71-1	850.2100	Acute Oral LD50--Mallard Duck: Banvel Herbicide	0073275 00028282	BASF Corporation	OWN	1979/5071
71-1	850.2100	Acute Oral LD50--Mallard Duck: Banvel Technical: Final Report	00025392 00159794	BASF Corporation	OWN	1977/5070
72-2	850.1010	Acute Toxicity of Banvel Technical to Water Flea Daphnia magna	00052126	BASF Corporation	OWN	1977/5068
61 series	830 Series	Sodium Dicambate Technical Product Identity and Composition	43320601	BASF Corporation	OWN	1994/5276
62 series	830 Series	Sodium Dicambate Technical Analysis and Certification of Product Ingredients	43320602	BASF Corporation	OWN	1994/5278
84-2	870 Series	Salmonella Plate Incorporation Mutagenicity Assay (Ames Test) with a Confirmatory Assay:	43310303	BASF Corporation	OWN	1994/5251
84-2	870 Series	L5178Y/TK+/- Mouse Lymphoma Mutagenesis Assay with a Confirmatory Assay	43310306	BASF Corporation	OWN	1994/5245

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 20 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	Product: Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
81-4	870.2400	Primary Eye Irritation Study in Albino Rabbits with Sodium Dicambate Technical	43599101	BASF Corporation	OWN	1995/5227
63-12	830.7000	pH of Dicamba Sodium Salt, Technical: Laboratory Final Report	43320608	BASF Corporation	OWN	1994/5256
Series 63	830.7050	Spectroscopic Data of Dicamba	47504709	BASF Corporation	OWN	1993/5000195
171-4j	860.1480	A Meat and Milk Magnitude of the Residue Study with Dicamba in Lactating Dairy Cows	44891303	BASF Corporation	OWN	1998/5106
171-4k	860.1500	The Magnitude of Dicamba Residues in Wheat Forage and Hay	44891302	BASF Corporation	OWN	1999/5008
171-4k	860.1500	Analysis of Wheat and Wheat Processed Fractions for Dicamba and 5-Hydroxy Dicamba	40663801	Sandoz	OWN	1986/5171
165-1	860.1850	Confined Accumulation Studies of Dicamba on Rotational Crops After Spring Application	41972001	Sandoz	OWN	1989/5231
63-3	830.6303	Physical State of Dicamba, Technical	43140302	Sandoz	OWN	1993/5252
63-2	830.6302	Color of Dicamba, Technical	43140301	Sandoz	OWN	1993/5253
63-7	830.7300	Density of Dicamba, Technical	43140305	Sandoz	OWN	1993/5254

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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DATA MATRIX

Date 3-23-12	EPA Reg No./File Symbol 7969-132	Page 21 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
63-5	830.7200	Melting Point of Dicamba, Technical	43140304	Sandoz	OWN	1993/5255
63-12	830.7000	pH of Dicamba, Technical	43140310	Sandoz	OWN	1993/5256
63-8	830.7840	Solubility of Technical Dicamba in Solvents	43140306	Sandoz	OWN	1993/5265
63-4	830.6304	Determination of Odor for Dicamba, Technical	43140303	Sandoz	OWN	1993/5270
63-14	830.6314	Oxidizing or Reducing Action of Dicamba, Tech	43140311	Sandoz	OWN	1993/5278
63-16	830.6316	Explodability of Dicamba, Technical	43140312	Sandoz	OWN	1993/5279
830.7950	63-9	Vapor Pressure of Dicamba Using the Thermal	43140307	Sandoz	OWN	1994/5202
63-20	830.6320	Corrosivity of Dicamba, Technical	43140314	Sandoz	OWN	1994/5203
63-17	830.6317	Stability of Technical Dicamba	43231803	Sandoz	OWN	1994/5216
Series 61 /62	830.1550	Dicamba Technical Product Identity and	43231801	Sandoz	OWN	1994/5223
Series 61 /62	830.1750	Dicamba Technical Analysis and Certification of Product Ingredients	43231802	Sandoz	OWN	1994/5225
63-2	830.6302	Color of Dicamba Sodium Salt, Technical	43320603	Sandoz	OWN	1994/5252
63-3	830.6303	Physical State of Dicamba Sodium Salt,	43320604	Sandoz	OWN	1994/5253

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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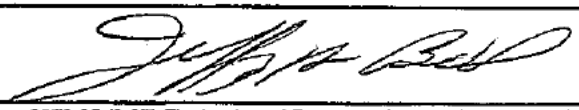
Date 3-23-12	**EPA Reg No./File Symbol** 7969-132	Page 22 of 23
Applicant's/Registrant's Name & Address BASF Corporation, 26 Davis Drive, Research Triangle Park, NC 27709-3528	**Product:** Dicamba Technical Herbicide	
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
63-7	830.7300	The Density of Dicamba Sodium Salt, Technical	43320607	Sandoz	OWN	1994/5254
63-5	830.7200	Melting Point of Dicamba Sodium Salt, Technical	43320606	Sandoz	OWN	1994/5255
63-4	830.6304	Determination of the Odor of Sodium Dicambate	43320605	Sandoz	OWN	1994/5280
164-1	835 Series	Terrestrial Dissipation Study with Dicamba	43361506	Sandoz	OWN	1994/5305
164-1	835 Series	Terrestrial Dissipation Study with Dicamba	43361507	Sandoz	OWN	1994/5304
63-20	830.6320	Determination of Corrosion Characteristics of Banvel Herbicide	43554201	Sandoz	OWN	1995/5217
63-17	830.6317	Storage Stability of Banvel Herbicide	43758507	Sandoz	OWN	1995/5300
63-17	830.6317	Storage Stability of Dicamba Acid	43758506	Sandoz	OWN	1995/5302
171-4k	860.1500	The Magnitude of Dicamba Residues in Cotton Gin Byproducts	45196801	BASF Corporation	OWN	2000/5151
None	None	Dicamba: Review of Recent Pharmacokinetic Studies and Discussion of Dose Level Selection	46022301	BASF Corporation	OWN	2003/5000325

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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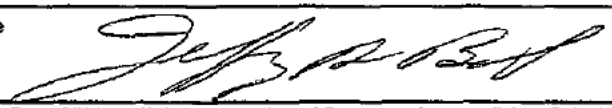
Ingredient Dicamba acid (3,6-dichloro-o-arsinic acid) CAS Registry Number 1918-00-9		

Guideline	OPPTS	Guideline Study Name	MRID Number	Submitter	Status	Note
None	None	^{14}C-Dicamba- Study on Plasmakinetics in Rats	46022302	BASF Corporation	OWN	2002/5004466
None	None	^{14}C-Dicamba- Study on Effect of Probenecid on	46022303	BASF Corporation	OWN	2003/1005488
	Special	Determination of Transferable Turf Residues with Dicamba	44959001	BASF Corporation	OWN	1999/5000179

Signature	Name and Title	Date
	Jeffrey H. Birk Regulatory Manager	3-23-12

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United States
Environmental Protection Agency
Washington, DC 20460

- [x] **Registration**
- [ ] **Amendment**
- [ ] **Other**

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
7969-XXX GUL	Kathryn Montague	[ ] None [ ] Restricted
4. Company/Product (Name) Engenia herbicide	**PM#** 23	

5. Name and Address of Applicant *(Include ZIP Code)*

BASF
26 Davis Drive
Research Triangle Park, NC 27709

[ ] *Check if this is a new address*

6. Expedited Reveiw. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:

EPA Reg. No. _____

Product Name _____

Section - II

- [ ] Amendment - Explain below.
- [ ] Resubmission in response to Agency letter dated _____
- [ ] Notification - Explain below.
- [ ] Final printed labels in repsonse to Agency letter dated _____
- [ ] "Me Too" Application.
- [x] Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

BASF is requesting the registration of Engenia herbicide, a new amine salt of dicamba for use in conventional crops and dicamba tolerant soybeans. This submission is a R320 PRIA action, new product, requires data review in science divisions.
Contact Jeff Birk at 919-547-2622 (phone), 919-547-2850 (fax) or by Email at jeffrey.birk@basf.com

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
[ ] Yes [x] No	[ ] Yes [x] No	[ ] Yes [x] No	[ ] Metal [x] Plastic [ ] Glass [ ] Paper [ ] Other (Specify) _____
Certification must be submitted	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
[x] Label [ ] Container	2.5 gallons	[x] On label associated with container

6. Manner in Which Label Is Affixed to Product [x] Lithograph / Paper glued / Stenciled [ ] Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
Jeffrey H. Birk	Regulatory Manager	919-547-2622

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowlingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received **(Stamped)**

2. Signature	3. Title	4. Typed Name	5. Date
Jeffrey H. Birk	Regulatory Manager	Jeffrey H. Birk	April 4, 2012

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Pages 146-155*Confidential Statement of Formula may be entitled to confidential treatment*